Noise Technical Report for the Hillel Center for Jewish Life Project, City of San Diego Project Number 212995

Prepared for

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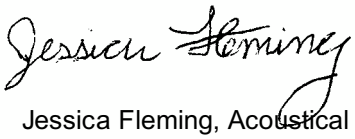

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1.0 Summary

The proposed Hillel Center for Jewish Life project is located adjacent to La Jolla Village Drive, Torrey Pines Road, and La Jolla Scenic Way in the city of San Diego. The project would construct Hillel Center for Jewish Life. This report focuses on the potential traffic noise impacts to the project due to traffic on La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road. Measures are indicated as needed to ensure compliance with the City's noise standards.

As discussed below, exterior noise levels at the exterior use areas are not projected to exceed 65 community noise equivalent level (CNEL). However, exterior noise levels at the faces of the proposed buildings are projected to exceed 60 CNEL across the entire project site. Therefore, specific construction techniques are required to ensure that interior noise levels do not exceed 45 CNEL.

When building plans are available for the proposed buildings and prior to the issuance of building permits, a detailed acoustical analysis shall demonstrate that interior noise levels due to exterior sources would be at or below the 45-CNEL standard. Specifically, the interior acoustical analysis shall determine the Sound Transmission Class (STC) values for the window and door components that would be necessary to ensure that interior noise levels due to exterior source would be at or below 45 CNEL. Additionally, where exterior noise levels are projected to exceed 60 CNEL, it would be necessary to close the windows to achieve the necessary exterior-to-interior noise reduction. Consequently, the design for the proposed buildings shall include a ventilation or air conditioning system to provide a habitable interior environment, when the windows are closed.

On-site noise sources would be those associated with typical student activities at the courtyard and patios. Noise levels generated during larger gatherings at the proposed facility are not projected to exceed noise ordinance standards at the adjacent residential uses.

The proposed buildings would require heating, ventilation, and air conditioning (HVAC) for heating and cooling. These HVAC units would be located on the rooftops of the proposed buildings. Noise levels due to these units were calculated. Noise levels are not projected to exceed noise ordinance standards at the adjacent residential uses.

2.0 Introduction

The project is located on the lot at the intersections of La Jolla Village Drive at Torrey Pines Road and La Jolla Village Drive at La Jolla Scenic Way in the city of San Diego, California. The project would construct a student center including meeting rooms, offices, a lounge, a kitchen, a library/chapel, and a courtyard. Figure 1 shows the regional location of the project and Figure 2 is an aerial photograph of the project vicinity. Figure 3 shows the site plan for the project.

Impacts are assessed in accordance with the guidelines, policies, and standards established by the City of San Diego. Measures are recommended, as required, to avoid adverse impacts to noise-sensitive areas.

3.0 Analysis Methodology

3.1 Applicable Standards and Definitions of Terms

3.1.1 Fundamentals of Traffic Noise and Noise Descriptors

The actual impact of noise is not a function of loudness alone. The time of day which noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. The noise descriptors used for this study are the one-hour average equivalent noise level ($L_{eq[1]}$), and the community noise equivalent level (CNEL).

The CNEL is a 24-hour A-weighted average sound level from midnight to midnight obtained after the addition of 5 decibels (dB) to sound levels occurring between 7:00 P.M. and 10:00 P.M., and 10 dB to sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

Sound from a small localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level decreases or drops off at a rate of 6 dB(A) for each doubling of the distance (6 dB(A)/DD).

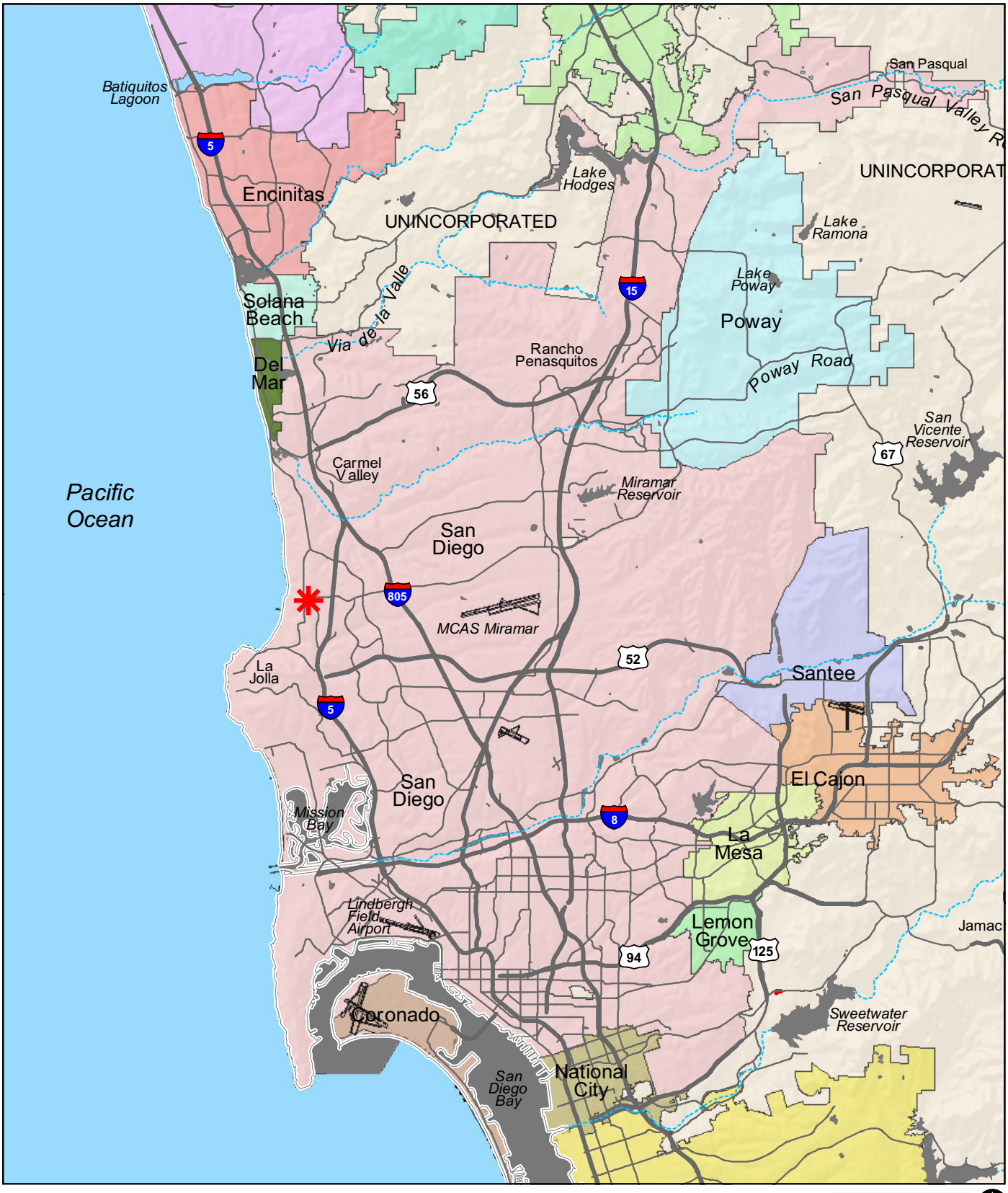

FIGURE 1

Regional Location

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FIGURE 2
Aerial Photograph of the Project and Vicinity and Noise Measurement Locations

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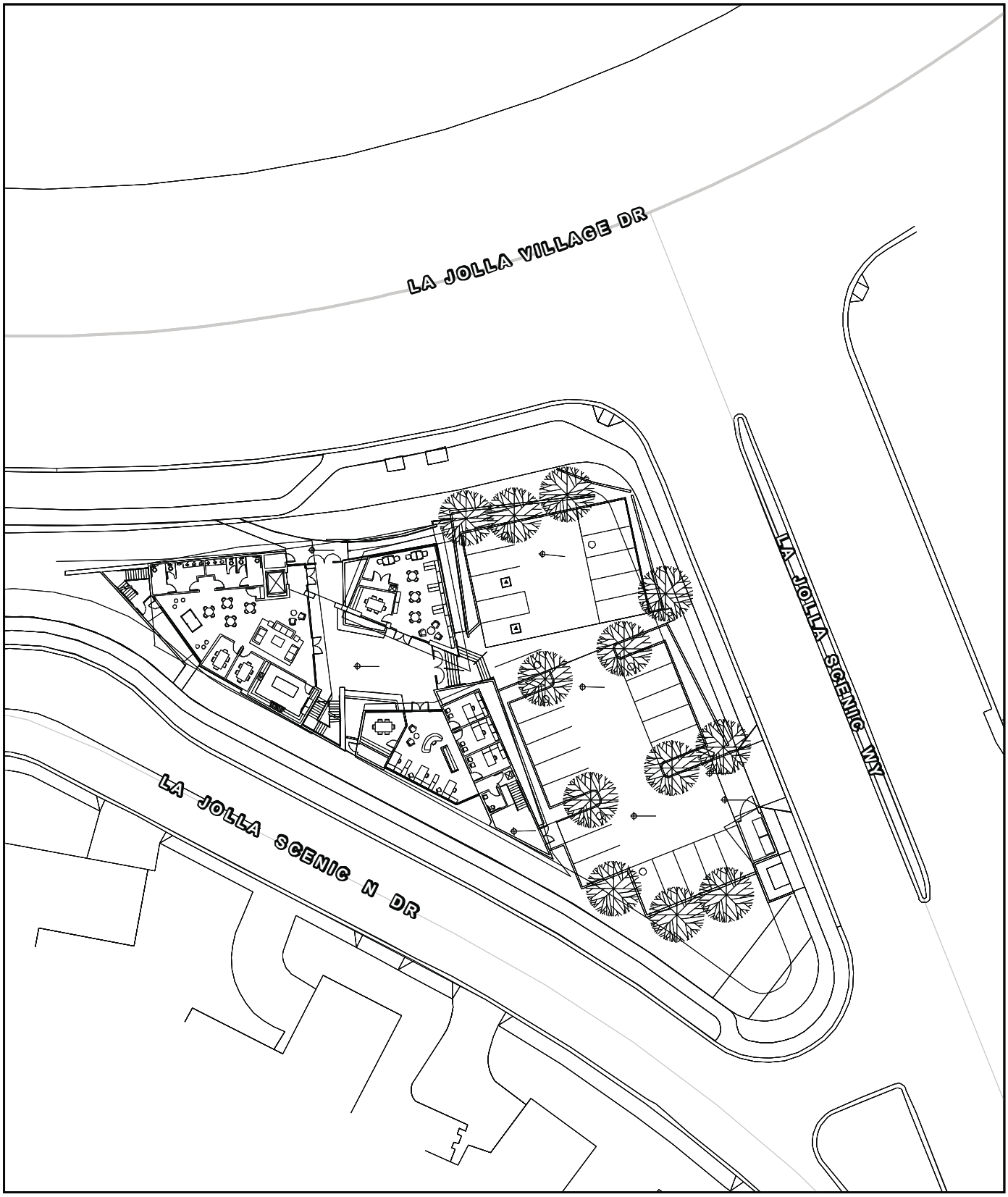

Project Lines

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FIGURE 3
Proposed Site Plan

However, highway traffic noise is not a single, stationary point source of sound. The movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The drop-off rate for a line source is 3 dB(A)/DD.

Change in noise levels is perceived as follows: 3 dB(A) barely perceptible, 5 dB(A) readily perceptible, and 10 dB(A) perceived as a doubling or halving of noise.

3.1.2 Standards Applicable to Traffic Noise

Impacts to future sensitive receivers were evaluated in relation to the noise level standards promulgated in the City of San Diego General Plan (2008). Table 1 shows the land use noise compatibility guidelines. Hillel is a Jewish organization for graduate and undergraduate students. The Hillel Center for Jewish Life is led by professional Jewish educators and several of its staff members have advanced training and/or education in Jewish studies and education. The Hillel Center for Jewish Life would act as a center for Jewish spirituality, learning and religious growth. The facility would also provide offices and meeting spaces for staff to fulfill a religious mission. Therefore, the project would construct meeting rooms for religious study, a lounge, a kitchen, a courtyard, and a library that would serve as a chapel. The project would also include the operation of religious offices, including an office for the rabbi. As shown in Table 1, there are two Institutional standards that could apply to the project. The exterior noise standard for places of worship is 65 CNEL. The exterior noise standard for higher education institutional facilities is 70 CNEL. These standards are applicable at exterior usable areas. To be conservative, an exterior noise standard of 65 CNEL for a place of worship was used for this analysis. Noise-sensitive interior spaces have an interior standard of 45 CNEL.

The City of San Diego assumes that standard construction techniques would provide a 15-dB reduction of exterior noise levels to an interior receiver. With these criteria, standard construction could be assumed to result in interior noise levels of 45 CNEL or less when exterior sources are 60 CNEL or less. When exterior noise levels are greater than 60 CNEL, consideration of specific construction techniques is required.

For this study, the exterior usable area was considered to be the center courtyard.

TABLE 1
LAND USE NOISE COMPATIBILITY GUIDELINES

Land Use Category	Exterior Noise Exposure [CNEL] 60	65	70	75	80
Open Space, Parks, and Recreational					
Community and Neighborhood Parks; Passive Recreation					
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Water Recreational Facilities; Horse Stables; Park Maintenance Facilities					
Agricultural					
Crop Raising and Farming; Aquaculture, Dairies; Horticulture Nurseries and Greenhouses; Animal Raising, Maintaining and Keeping; Commercial Stables					
Residential					
Single Units; Mobile Homes; Senior Housing		**45**			
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations		**45**	**45**		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities		**45**			
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)		**45**	**45**		
Cemeteries					
Sales					
Building Supplies/Equipment; Food, Beverage, and Groceries; Pets and Pet Supplies; Sundries, Pharmaceutical, and Convenience Sales; Wearing Apparel and Accessories			**50**	**50**	
Commercial Services					
Building Services; Business Support; Eating and Drinking; Financial Institutions; Assembly and Entertainment; Radio and Television Studios; Golf Course Support			**50**	**50**	
Visitor Accommodations		**45**	**45**	**45**	
Offices					
Business and Professional; Government; Medical, Dental, and Health Practitioner; Regional and Corporate Headquarters			**50**	**50**	
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair and Maintenance; Commercial or Personal Vehicle Sales and Rentals; Vehicle Equipment and Supplies Sales and Rentals; Vehicle Parking					
Wholesale, Distribution, Storage Use Category					
Equipment and Materials Storage Yards; Moving and Storage Facilities; Warehouse; Wholesale Distribution					
Industrial					
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking and Transportation Terminals; Mining and Extractive Industries					
Research and Development				**50**	

Notes:

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.
		Outdoor Uses	Activities associated with the land use may be carried out.
	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

SOURCE: City of San Diego 2008

3.1.3 Standards Applicable to On-site Generated Noise

Section 59.5.0401 of the City's Noise Abatement and Control Ordinance states that:

> A. It shall be unlawful for any person to cause noise by any means to the extent that the one-hour average sound level exceeds the applicable limit.
>
> B. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts…

The applicable noise limits are summarized in Table 2.

TABLE 2
STATIONARY NOISE LEVEL LIMITS

Land Use	Time of Day	One-Hour Average Sound Level [dB(A) L_{eq}]
Single Family Residential	7:00 A.M. to 7:00 P.M.	50
	7:00 P.M. to 10:00 P.M.	45
	10:00 P.M. to 7:00 A.M.	40
Multi-Family Residential (up to a maximum density of 1 unit/2,000 square feet)	7:00 A.M. to 7:00 P.M.	55
	7:00 P.M. to 10:00 P.M.	50
	10:00 P.M. to 7:00 A.M.	45
All Other Residential	7:00 A.M. to 7:00 P.M.	60
	7:00 P.M. to 10:00 P.M.	55
	10:00 P.M. to 7:00 A.M.	50
Commercial	7:00 A.M. to 7:00 P.M.	65
	7:00 P.M. to 10:00 P.M.	60
	10:00 P.M. to 7:00 A.M.	60
Industrial or Agricultural	Anytime	75

Single family residential uses are located adjacent to the project site. The most restrictive noise limit for single family uses is 40 dB(A) L_{eq}.

3.1.4 Standards Applicable to Construction Noise

Section 59.5.0404 of the City's Noise Abatement and Control Ordinance states that:

> A. It shall be unlawful for any person, between the hours of 7:00 P.M. of any day and 7:00 A.M. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair

any building or structure in such a manner as to create disturbing, excessive or offensive noise. . . .

B. . . . it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 A.M. to 7:00 P.M.

3.2 Existing Noise Level Measurements

To assess the potential impacts of noise resulting from traffic on adjacent roadways, noise measurements were taken at the project site on February 11, 2008. Noise measurements were taken with one Larson-Davis Model 720 Type 2 Integrating Sound Level Meter, serial number 0266. The following parameters were used:

Filter:	A-weighted
Response:	Fast
Time History Period:	5 seconds

The meter was calibrated prior to the day's measurements. Three ground-floor measurements (five feet above the ground) were taken at three locations at the project site. Additionally, while the ground-floor measurements were being made, traffic counts were taken on La Jolla Village Drive, Torrey Pines Road, and La Jolla Scenic Way.

3.3 Traffic Noise Analysis

3.3.1 Traffic Parameters

Existing and future (Year 2030) traffic volumes on La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road in the project vicinity were obtained from the traffic report prepared for the project (Linscott, Law & Greenspan, Engineers 2008).

La Jolla Village Drive is a six-lane prime arterial roadway with a posted speed of 40 miles per hour (mph). The existing traffic volume on La Jolla Village Drive between Torrey Pines Road and La Jolla Scenic Way is 40,500 average daily traffic (ADT). The future traffic volume on La Jolla Village Drive is 49,200 ADT. The traffic mix for La Jolla Village Drive was based on field traffic counts. The traffic mix was assumed to be 98.8 percent autos, 0.2 percent motorcycles, 0.3 percent medium trucks, 0.5 percent buses, and 0.2 percent heavy trucks.

La Jolla Scenic Way is a four-lane local collector roadway with a posted speed of 35 mph. The existing traffic volume on La Jolla Scenic Way is 9,200 ADT and the future traffic volume is 10,660 ADT. The traffic mix for La Jolla Scenic was based on field traffic counts and was adjusted to include a small percentage of heavy trucks that were not observed during the measurement period. The traffic mix was assumed to be 97.4 percent autos, 0.9 percent motorcycles, 0.6 percent medium trucks, 0.6 percent buses, and 0.5 percent heavy trucks.

Torrey Pines Road is a four-lane major arterial roadway with a posted speed of 45 mph. The existing traffic volume on Torrey Pines Road is 28,100 ADT and the future traffic volume is 32,240 ADT. The traffic mix for Torrey Pines Road was based on field traffic counts. The traffic mix was assumed to be 97.9 percent autos, 0.3 percent motorcycles, 0.9 percent medium trucks, 0.3 percent buses, and 0.6 percent heavy trucks.

As discussed below, the posted traffic speeds discussed above were found to be slightly higher than the observed speeds and the speeds that match the noise measurement data well for La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road. This is due to heavy traffic volumes and the close proximity of several busy intersections with traffic lights. To be conservative, the posted speeds were used for modeling future traffic noise levels.

Table 3 below summarizes the future traffic parameters used in this analysis.

TABLE 3
YEAR 2030 ROADWAY TRAFFIC PARAMETERS

		Percent					
Roadway	ADT	Autos	Motor-cycles	Medium Trucks	Buses	Heavy Trucks	Speed (mph)
La Jolla Village Drive	49,200	98.8	0.2	0.3	0.5	0.2	40
La Jolla Scenic Way	10,660	97.4	0.9	0.6	0.6	0.5	35
Torrey Pines Road	28,100	97.9	0.3	0.9	0.3	0.6	45

The day, evening, and nighttime traffic distribution for all roadways was assumed to be 77 percent daytime traffic, 10 percent evening traffic, and 13 percent nighttime traffic. With these assumptions, the CNEL is approximately 2 dB above the average daytime hourly equivalent noise level.

3.3.2 Analysis of Traffic Noise

Noise generated by future traffic was modeled using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5. The TNM program calculates noise levels at selected receiver locations using input parameter estimates such as projected hourly average traffic rates; vehicle mix, distribution, and speed;

roadway lengths and gradients; distances between sources, barriers, and receivers; and shielding provided by intervening terrain, barriers, and structures.

Locations and elevations of the project site and adjacent properties and roadways were obtained from CAD drawing files (MW Steele Group, Inc. 2010).

Receivers, roadways, and barriers are input into the TNM model using three-dimensional coordinates. The Y-axis pointed north and the X-axis pointed east.

The TNM model allows the user to choose from a number of ground conditions. As seen in the aerial photograph shown in Figure 2, the project site is currently a mobile vacant dirt lot. For this reason, hard soil conditions were assumed in the modeling of noise measurement conditions. Pavement ground conditions were assumed for the analysis of future conditions, since a large portion of the site would be paved. The average annual temperature in the project area is 64 degrees Fahrenheit. The average relative humidity was assumed to be 69 percent based on the yearly average humidity at Lindbergh Field (Western Regional Climate Center [WRCC] 2006).

Exterior traffic noise levels to first-floor receivers were calculated. First-floor receivers were placed at five feet above ground level. Calculations were completed for a daytime hour, and the resulting hourly L_{eq}s were weighted and combined into CNEL values. Projected CNEL values based on the traffic distributions used here are approximately 2 dB higher than the daytime hourly L_{eq} calculated by TNM as indicated above.

3.4 On-Site Generated Noise Analysis

The proposed buildings would require HVAC for heating and cooling. A mechanical equipment well would be located on the roof of each of the three buildings. The equipment wells would be shielded by a 3.5-foot parapet wall on top of the roofs. It is not known at this time which manufacturer, brand, or model of unit or units will be selected for use in the project. Assuming that a unit with a capacity of 1 ton would be required for 1,000 square feet of building space, it was conservatively calculated that a 5-ton unit would be required for each of the three buildings.

Based on review of various manufacturer specifications for example units, a representative noise level for a 5-ton unit would be a sound power level of 82 dB. This is approximately equal to a sound pressure level of 73 dB(A) L_{eq} at 3 feet. For a 5-ton unit, the representative noise level of 73 dB(A) L_{eq} at 3 feet was used for this analysis.

The inverse square law was used to adjust the representative noise level for distance, assuming the noise can be treated as a point source. The equation for this calculation is as follows:

$H = 20 \log (R_o \backslash R)$

where

H = total noise attenuation due to distance
R = distance from source
R_o = reference distance from source

This calculated attenuation was then subtracted from the representative noise level to determine the noise level at the desired distance.

As discussed, equipment wells would be shielded by a 3.5-foot parapet wall on top of the roofs. To calculate the noise reduction provided by the parapet walls, first a Fresnel number and the insertion loss must be calculated. Sound waves can bend around barriers to a degree essentially governed by a non-dimensional parameter called the Fresnel number. The insertion loss (i.e., noise reduction) is a function of the Fresnel number. Using the location and heights of the HVAC units, receivers, and walls, the Fresnel number and insertion loss was calculated for each HVAC unit and receiver.

4.0 Existing Conditions

The project site is a vacant lot covered with grasses and ice plant. Land in the project area comprises primarily developed land. Residential developments are located to the south and east, the University of California San Diego (UCSD) is located to the north, and soccer fields and a grass field are located to the west (see Figure 2). Ambient noise levels are primarily due to traffic on La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road.

Three measurements were made at the project site. Figure 2 shows the locations of these measurements. Noise measurement data are contained in Attachment 1.

Measurement 1 was located on the project site adjacent to La Jolla Village Drive. During the measurement period, traffic on La Jolla Village Drive was affected by the traffic lights located at the intersection of La Jolla Village Drive and Torrey Pines Road and the intersection of La Jolla Village Drive and La Jolla Scenic Way. The posted speed on La Jolla Village Drive is 40 mph. However, during the measurement period, the average observed traffic speed was 30 mph past the project site. This is because of the heavy traffic volumes and the close proximity of several busy intersections with traffic lights. Noise levels were measured for 15 minutes and traffic on La Jolla Village Drive was counted during the interval. Traffic on La Jolla Village Drive was the dominant noise source. The average measured noise level was 67.4 dB(A) L_{eq} at Measurement Location 1.

Measurement 2 was located just south of the project site adjacent to Torrey Pines Road. Traffic on Torrey Pines Road and La Jolla Village Drive were the dominant noise sources. Noise levels were measured for 15 minutes, and traffic on Torrey Pines Road was counted during the interval. The average measured noise level was 70.9 dB(A) L_{eq} at Measurement Location 2.

Measurement 3 was located on the project site adjacent to the intersection of La Jolla Scenic Way and La Jolla Scenic Drive North. Traffic on La Jolla Scenic Way and traffic on La Jolla Village Drive were the dominant noise sources. Noise levels were measured for 15 minutes, and traffic on La Jolla Scenic Way was counted during the interval. The average measured noise level was 61.2 dB(A) L_{eq} at Measurement Location 3. The traffic counts are summarized in Table 4.

TABLE 4
15-MINUTE TRAFFIC COUNTS

Measurement Location	Cars	Motorcycles	Medium Trucks	Buses	Heavy Trucks
Measurement 1					
WB La Jolla Village Drive	346	1	1	2	1
EB La Jolla Village Drive	289	0	1	1	1
Measurement 2					
NB Torrey Pines Road	171	1	1	1	1
SB Torrey Pines Road	138	0	1	0	2
Measurement 3					
NB La Jolla Scenic Way	66	0	0	1	0
SB La Jolla Scenic Way	45	1	1	0	0

WB = westbound, EB = eastbound, NB = northbound; SB = southbound.

To determine whether or not the computer-modeled parameters to be used were reasonable, the TNM model was run using the observed traffic volumes and mix data indicated in Table 4 for Measurement Locations 1, 2, and 3, along with the existing topography.

The average traffic speeds for La Jolla Village Drive, Torrey Pines Road, and La Jolla Scenic Way were varied until the output reasonably matched the noise measurements.

Table 5 shows the measured noise levels compared with the modeled noise levels using the field traffic counts and average speeds of 30 mph on La Jolla Village Drive, 40 mph on Torrey Pines Road, and 30 mph on La Jolla Scenic Way, which are consistent with the speeds observed by traffic following adjacent to the project site. The model output should be close to the same level as the measured value, if the model is accurately representing the existing physical conditions. As shown in Table 5, it can be seen that the modeled parameters are 0.5 to 1.0 decibels different from the measured conditions. TNM input and output data for modeling the measured conditions are provided in Attachment 2.

TABLE 5
COMPARISON OF MEASURED AND MODELED NOISE LEVELS
[dB(A) L_{eq}]

Measurement Location	Measured Noise Level	Modeled Noise Levels	Difference
1	67.4	66.4	1.0
2	70.9	70.1	0.8
3	61.2	61.7	0.5

5.0 Future Acoustical Environment and Impacts

5.1 Traffic Noise

5.1.1 Exterior Noise

The methods used in the analysis of future conditions are described in the Analysis Methodology section of this report. The traffic parameters used are discussed above.

Noise levels were modeled for a series of 50 ground-floor receivers located throughout the project area to determine the future noise contours over the project site due to traffic on the area roadways.

TNM input and output are provided in Attachment 3. The resulting noise contours at five feet above the ground are shown in Figure 4. These noise contours include the effects of future grading on the property, but do not take into account any shielding provided by the proposed buildings. “Pavement” ground conditions were used in modeling noise levels at these receivers to account for the future site condition. To be conservative, the posted traffic speeds were used for modeling future traffic noise levels. As discussed above, the observed speeds were slower than the posted speeds.

As seen from Figure 4, future traffic noise levels are projected to exceed 65 CNEL across the entire project site. Noise levels are projected to exceed 70 CNEL on the northern half of the project site adjacent to La Jolla Village Drive.

Noise levels were also modeled for six receivers located at the courtyard, the second floor patio, and the northern entry way as shown in Figure 5. Noise levels were modeled at first-floor receivers 1 through 5 five feet above ground level; and at the second-floor receiver 6, five feet above the elevation of the patio. Receivers 1 through 4 and Receiver 6 are located at the exterior usable areas to determine compliance with the 65 CNEL

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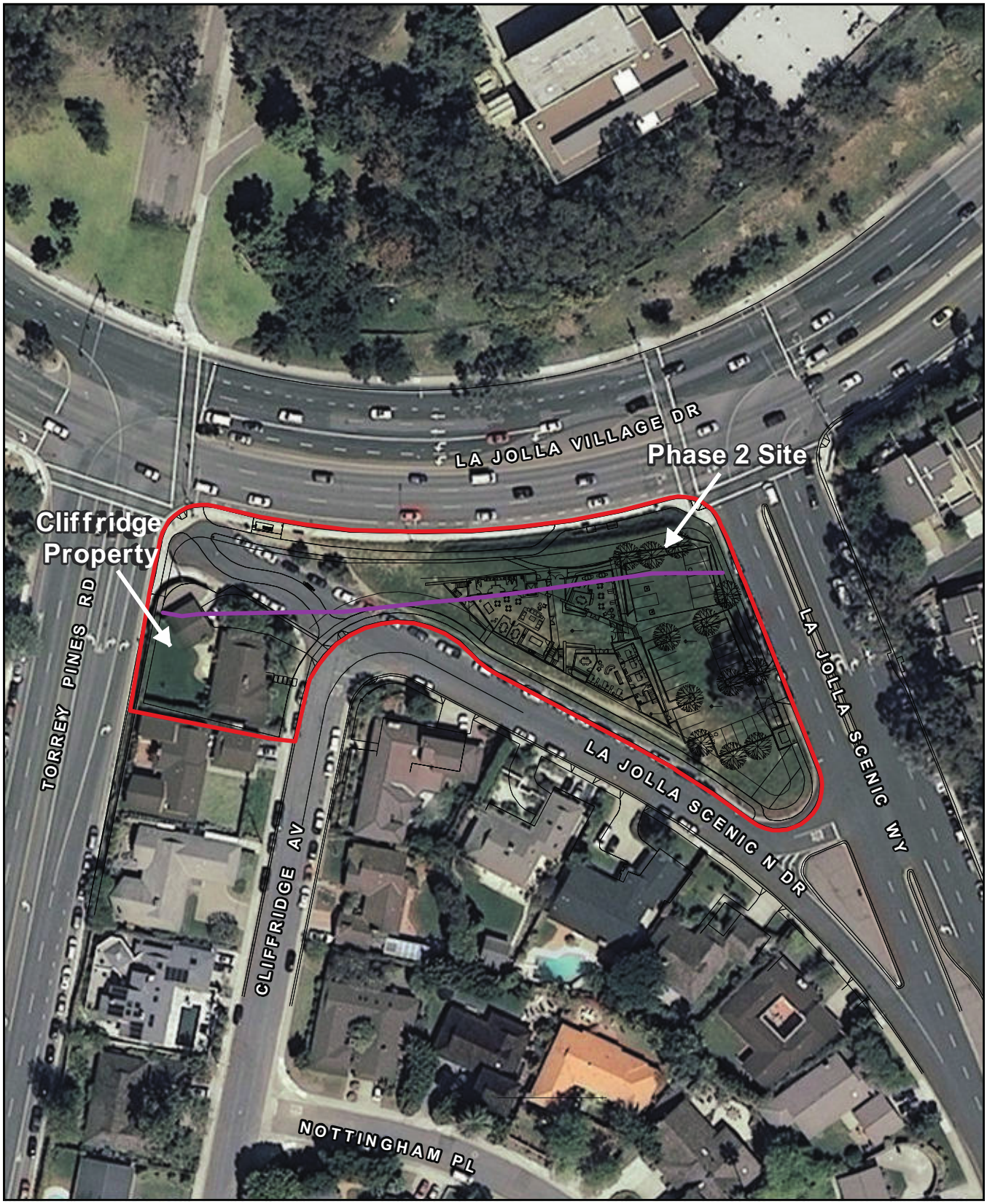

0 Feet 100

Project Boundary
Project Lines
Noise Contour
70 CNEL

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FIGURE 4
Future Traffic Noise Contours

Map Source: M.W. Steele Group, Inc., February 2010

Model Receiver

0 Feet 16

FIGURE 5
Modeled Receivers

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exterior noise standard. Receiver 5 is located at the northern entry to the courtyard and does not represent exterior usable space. Noise levels were modeled at this location to determine the need for an interior noise analysis. TNM input and output are provided in Attachment 4. Noise levels at these locations include the effects of topography and shielding provided by the proposed building.

Table 6 below indicates the projected future noise levels at the six modeled receivers. As seen from this table, the noise levels are not projected to exceed 65 CNEL at the exterior usable areas. Exterior noise impacts would be less than significant and no mitigation would be required.

TABLE 6
FUTURE PROJECTED NOISE LEVELS (CNEL)

Receiver	Location	Projected Noise Level
1	Ground Floor Courtyard	56
2	Ground Floor Courtyard	60
3	Ground Floor Courtyard	59
4	Ground Floor Courtyard	63
5	Northern Entry to Courtyard*	68
6	Second Floor Patio	61

* Not exterior usable space

5.1.2 Interior Noise

As discussed above, noise-sensitive interior spaces have an interior standard of 45 CNEL. The City of San Diego conservatively assumes that standard construction materials would provide a 15-dB reduction of exterior noise levels to an interior receiver. With these criteria, standard construction could be assumed to result in interior noise levels of 45 CNEL or less when exterior sources are 60 CNEL or less. As shown in Table 6, exterior noise levels are projected to exceed 60 CNEL; hence, interior noise levels could exceed 45 CNEL. Interior noise impacts are potentially significant without mitigation.

5.2 On-Site Generated Noise

5.2.1 Student Noise

On-site noise sources would be those associated with typical student activities at the courtyard and patios. These activities typically consist of conversations, meetings, and general social gatherings and are not anticipated to exceed the applicable noise ordinance standards. In addition, as seen in Table 5, measured noise levels due to traffic on surrounding roadways exceed 60 dB(A) and are as high as 70 dB(A). Noise

due to student activities would not be significant when compared to existing and future traffic noise levels.

On rare occasions, the facility would have larger gatherings. Based on information provided by the applicant, it is expected that with the proposed facility, a typical Hillel program would draw between 10 and 30 students and, at most, 50 patrons to the site. A normal speaking voice has a sound power level of 65 dB. This is approximately equal to a sound pressure level of 56 dB(A) L_{eq} at 3 feet. Assuming all 50 patrons were speaking at the same time, it was calculated that the noise level would be 73 dB(A) L_{eq} at 3 feet. The center of this noise source was assumed to be the center of the proposed courtyard. A noise level of 73 dB(A) L_{eq} at 3 feet would attenuate to 43.4 dB(A) L_{eq} at the closest adjacent residential receiver 90 feet away. This is less than the daytime and evening noise ordinance limits of 50 and 45 dB(A) L_{eq}, respectively, for single family residential uses. The facility would not operate past 10:00 P.M.

5.2.2 HVAC Noise

The specific design of the HVAC system has not been completed at this stage of design. For analysis purposes, it was assumed that a 5-ton HVAC unit would be required for each of the three buildings. These units would be located on the building rooftops and would be surrounded by 3.5-foot high parapet walls. Noise levels were modeled for a series of 9 receivers located at the adjacent residential properties.. Receiver and source locations are shown in Figure 6. A sound level of 73 dB(A) L_{eq} at 3 feet was chosen as a representative noise level for each 5-ton unit.

Noise levels at the property lines due to the HVAC units were calculated as described in the Analysis Methodology Section. The noise level of 73 dB(A) L_{eq} at 3 feet for the units on each proposed building was adjusted for the distance and height from the proposed HVAC units to the adjacent residential property lines. Noise reduction provided by the parapet walls were determined first by calculating the Fresnel number and then converting this to an insertion loss. HVAC noise calculations are presented in Attachment 5. Table 7 summarizes the HVAC noise levels at each receiver. As shown, HVAC noise levels are not projected to exceed 40 dB(A) L_{eq} at the adjacent residential properties.

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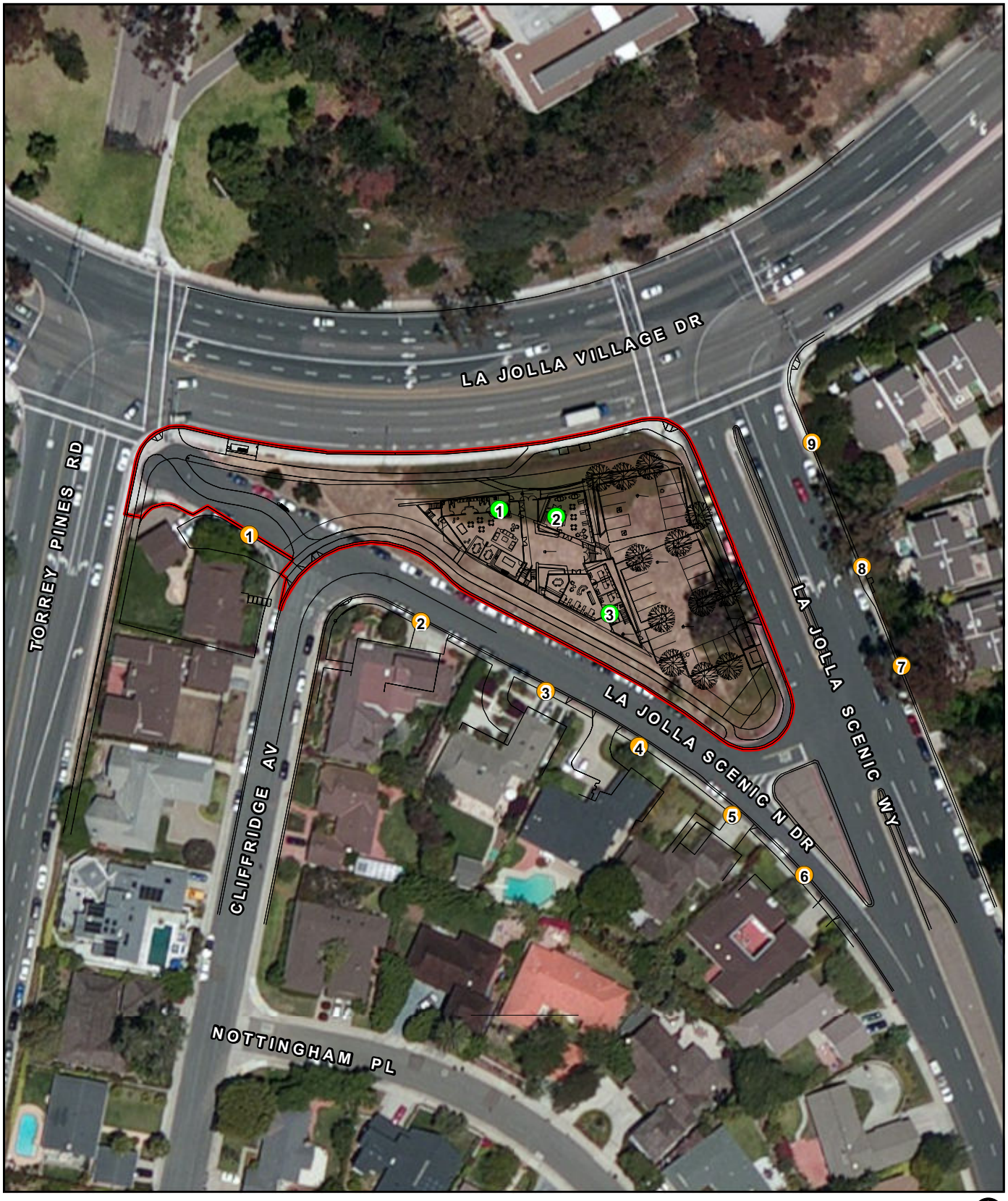

Project Boundary

Project Lines

HVAC Receiver

HVAC Location

0 Feet 100

RECON

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FIGURE 6

HVAC Locations and Modeled Receivers

TABLE 7
HVAC NOISE LEVELS [dB(A) L_{eq}]

Receiver	HVAC 1 Noise Level	HVAC 2 Noise Level	HVAC 3 Noise Level	Total Noise Level
1	25	25	23	29
2	28	29	28	33
3	27	29	32	35
4	25	27	31	33
5	22	24	27	29
6	21	23	24	28
7	21	23	25	28
8	22	25	25	29
9	22	25	25	29

5.3 Construction Noise

Noise associated with the earthwork, excavation, construction, and surface preparation for the project would result in short-term impacts to adjacent residential properties. A variety of noise-generating equipment would be used during the construction phase of the project, such as scrapers, dump trucks, backhoes, front-end loaders, jackhammers, and concrete mixers, along with others.

Construction of the project would include the recompaction and export of 4,000 cubic yards of soil, excavation for footings and utilities, fine site grading, deliveries, and building construction. The loudest noise levels would occur during grading operations. Table 7 summarizes the equipment that would be required during grading operations, the maximum noise levels, the usage factors, and the average hourly noise level produced by each piece of equipment. The usage factor is the percentage of time that the equipment would produce the maximum noise level at full power.

TABLE 7
CONSTRUCTION EQUIPMENT

Equipment[1]	Maximum Noise Level [dB(A) L_{eq}] at 50 Feet[2]	Usage Factor[2]	Average Hourly Noise Level at 50 Feet [dB(A) $L_{eq(1)}$]	Average Hourly Noise Level at 100 Feet [dB(A) $L_{eq(1)}$]
Dozer	81.7	40%	77.7	73.7
Loader	79.1	40%	75.1	69.1
Water Truck	76.5	40%	72.5	66.5
Dump Truck	76.5	40%	72.5	66.5
TOTAL			79.8	73.8

[1]SOURCE: Kovtun pers.com. 2010
[2]SOURCE: FHWA 2006

For a worst-case analysis, it was assumed that all the equipment listed in Table 7 would operate simultaneously. As shown, the worst-case average hourly noise level at 100 feet would be 73.8 dB(A) $L_{eq(1)}$.

Grading would occur over the entire site and would not be situated at any one location for a long period. Therefore, the acoustic center of the construction activity was assumed to be the center of the entire project site. As can be seen in Figure 2, neighboring uses are more than 100 feet from the center of the project site. Therefore, construction noise levels are projected to be within City standards and impacts would be less than significant.

5.4 Ground-Borne Vibration/Noise

The project does not propose any uses that would generate ground-borne vibration or noise. Project construction would not require pile driving. Ground-borne vibration impacts would be less than significant.

6.0 Conclusion

6.1 Traffic Noise

As discussed above, noise levels are not projected to exceed 65 CNEL at the exterior use areas. Impacts are less than significant. Therefore, no exterior noise mitigation is required.

Noise-sensitive interior spaces have an interior standard of 45 CNEL. The City of San Diego assumes that standard construction techniques would provide a 15 dB reduction of exterior noise levels to an interior receiver. As shown in Table 6, exterior noise levels are projected to exceed 60 CNEL. Therefore, specific construction techniques are required to ensure that interior noise levels do not exceed 45 CNEL.

The exterior to interior noise reduction provided by the building structure is partially a function of the STC values of the window and door components used in the building. The STC is an integer rating of how well a building partition attenuates sound. The greater the STC value, generally the greater the noise reduction. Window and door manufacturers produce windows and doors with a range of STC values.

Interior Noise Mitigation

> When building plans are available for the proposed buildings and prior to the issuance of building permits, a detailed acoustical analysis shall

demonstrate that interior noise levels due to exterior sources will be at or below the 45-CNEL standard. Specifically, the interior acoustical analysis shall determine the STC values for the window and door components that would be necessary to ensure that interior noise levels due to exterior source would be at or below 45 CNEL.

Additionally, where exterior noise levels are projected to exceed 60 CNEL, it will be necessary to close the windows to achieve the necessary exterior-to-interior noise reduction. Consequently, the design for the proposed buildings shall include a ventilation or air conditioning system to provide a habitable interior environment when the windows are closed.

6.2 On-Site Generated Noise

On-site noise sources would be those associated with typical student activities at the courtyard and patios. As discussed, noise levels generated during larger gatherings at the proposed facility are not projected to exceed noise ordinance standards at the adjacent residential uses.

The proposed buildings would require HVAC for heating and cooling. These HVAC units would be located on the rooftops of the proposed buildings. Noise levels due to these units were calculated. As shown, noise levels are not projected to exceed noise ordinance standards at the adjacent residential uses.

6.3 Construction Noise

Construction shall be limited to the hours of 7:00 A.M. to 7:00 P.M. Monday through Saturday as stated in the City of San Diego's Noise Abatement and Control Ordinance. In accordance with the City's noise ordinance, no construction shall take place on Sundays or on legal holidays specified in Section 21.04 of the San Diego Municipal Code with the exception of Columbus Day and George Washington's Birthday. No other abatement measures are required.

7.0 References Cited

Federal Highway Administration

1979 Highway Traffic Noise Prediction Model. Report No. FHWA-RD-77-108. U.S. Department of Transportation, Washington, D.C. December.

2006 Roadway Construction Noise Model (RCNM). Prepared by U.S. Department of Transportation. Version 1.00. February 2.

Kovtun, Gordon

2010 Personnel communication with Lisa Lind, RECON, via e-mail. Principal, KCM Group. October 25.

Linscott, Law & Greenspan, Engineers

2008 Traffic Impact Analysis for the Hillel Facility. LLG Ref. 3-08-1807. April 7.

MW Steele Group, Inc.

2010 CAD files of Project Site Plan sent to Bobbi Herdes, RECON. February 8.

San Diego Association of Governments

2008 Traffic Volume Forecast Internet Site: http://maximus.sandag.org /tfic/trfic30.html. Accessed February 14.

San Diego, City of

2008 City of San Diego General Plan.

Western Regional Climate Center

2006 Western U.S. Climate Historical Summaries: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0968 and http://www.wrcc.dri.edu/cgi-bin/clilcd.pl?ca23188. Accessed December 4.

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ATTACHMENTS

ATTACHMENT 1

C:\NOISE\LARDAV\SLMUTIL\11FEB_12.bin Time History Data
Sample Period (sec): 5.000

Site	Location	Run	Key	Meas Number	Date	Time	Level	Lmax	SEL
Measurement 1									
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				0	11Feb 11	12:32:25	64.0	65.6	71.0
				0	11Feb 11	12:32:30	65.0	68.1	72.0
				0	11Feb 11	12:32:35	63.2	65.3	70.2
				0	11Feb 11	12:32:40	57.1	60.6	64.0
				0	11Feb 11	12:32:45	56.7	59.8	63.7
				0	11Feb 11	12:32:50	56.7	60.3	63.7
				0	11Feb 11	12:32:55	56.6	59.9	63.6
				0	11Feb 11	12:33:00	57.0	59.7	64.0
				0	11Feb 11	12:33:05	58.0	60.4	65.0
				0	11Feb 11	12:33:10	55.9	59.6	62.8
				0	11Feb 11	12:33:15	57.9	63.7	64.9
				0	11Feb 11	12:33:20	71.1	76.3	78.1
				0	11Feb 11	12:33:25	69.3	71.3	76.3
				0	11Feb 11	12:33:30	65.1	69.7	72.1
				0	11Feb 11	12:33:35	75.9	79.6	82.9
				0	11Feb 11	12:33:40	69.7	74.1	76.7
				0	11Feb 11	12:33:45	66.2	67.0	73.2
				0	11Feb 11	12:33:50	65.4	66.4	72.4
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				0	11Feb 11	12:38:25	57.3	58.5	64.3
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				0	11Feb 11	12:47:15	57.6	59.7	64.5
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				0	11Feb 11	12:50:25	70.1	74.3	77.1
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				0	11Feb 11	12:50:45	71.3	75.4	78.3
				0	11Feb 11	12:50:50	70.9	72.0	77.8
				0	11Feb 11	12:50:55	67.9	69.3	74.9
				0	11Feb 11	12:51:00	66.3	71.0	73.3
				0	11Feb 11	12:51:05	64.8	64.8	71.8
Stop	Key								
Run	Key								
Measurement 2									
				0	11Feb 11	12:53:40	65.7	66.8	72.6
				0	11Feb 11	12:53:45	66.2	70.5	73.2
				0	11Feb 11	12:53:50	65.5	67.9	72.5
				0	11Feb 11	12:53:55	64.9	65.9	71.9
				0	11Feb 11	12:54:00	64.8	65.5	71.8
				0	11Feb 11	12:54:05	67.4	71.5	74.4
				0	11Feb 11	12:54:10	73.5	75.4	80.5
				0	11Feb 11	12:54:15	71.1	75.0	78.0
				0	11Feb 11	12:54:20	69.7	71.6	76.7
				0	11Feb 11	12:54:25	69.1	71.9	76.1
				0	11Feb 11	12:54:30	70.4	72.0	77.3
				0	11Feb 11	12:54:35	69.5	71.8	76.5
				0	11Feb 11	12:54:40	71.5	73.2	78.5
				0	11Feb 11	12:54:45	80.9	85.6	87.9
				0	11Feb 11	12:54:50	73.6	82.5	80.5
				0	11Feb 11	12:54:55	69.7	73.6	76.7
				0	11Feb 11	12:55:00	68.2	72.6	75.2
				0	11Feb 11	12:55:05	60.0	64.2	67.0
				0	11Feb 11	12:55:10	63.3	64.6	70.3
				0	11Feb 11	12:55:15	62.2	64.0	69.2
				0	11Feb 11	12:55:20	61.0	61.8	68.0
				0	11Feb 11	12:55:25	59.5	61.9	66.5
				0	11Feb 11	12:55:30	58.0	63.1	65.0
				0	11Feb 11	12:55:35	57.5	64.1	64.5
				0	11Feb 11	12:55:40	58.2	59.8	65.2
				0	11Feb 11	12:55:45	60.4	62.7	67.4
				0	11Feb 11	12:55:50	61.1	68.4	68.1
				0	11Feb 11	12:55:55	71.0	76.0	79.0
				0	11Feb 11	12:56:00	58.4	61.7	65.4

0	0	11Feb 11	12:56:05	57.3	58.1	64.3
0	0	11Feb 11	12:56:10	61.9	66.9	68.9
0	0	11Feb 11	12:56:15	59.7	63.7	66.6
0	0	11Feb 11	12:56:20	68.6	71.2	75.6
0	0	11Feb 11	12:56:25	75.5	86.5	82.5
0	0	11Feb 11	12:56:30	72.2	79.6	79.2
0	0	11Feb 11	12:56:35	73.0	78.2	80.0
0	0	11Feb 11	12:56:40	71.9	78.2	78.9
0	0	11Feb 11	12:56:45	72.5	78.8	79.5
0	0	11Feb 11	12:56:50	69.4	71.5	76.3
0	0	11Feb 11	12:56:55	67.6	69.2	74.6
0	0	11Feb 11	12:57:00	66.9	69.0	73.9
0	0	11Feb 11	12:57:05	64.8	66.6	71.8
0	0	11Feb 11	12:57:10	66.9	69.2	73.9
0	0	11Feb 11	12:57:15	68.0	73.8	75.0
0	0	11Feb 11	12:57:20	64.4	67.1	71.4
0	0	11Feb 11	12:57:25	62.1	63.1	69.1
0	0	11Feb 11	12:57:30	63.1	65.7	70.1
0	0	11Feb 11	12:57:35	63.2	66.8	70.2
0	0	11Feb 11	12:57:40	59.1	60.0	66.1
0	0	11Feb 11	12:57:45	58.2	59.5	65.2
0	0	11Feb 11	12:57:50	60.6	65.8	67.6
0	0	11Feb 11	12:57:55	61.4	65.3	68.4
0	0	11Feb 11	12:58:00	64.6	68.6	71.6
0	0	11Feb 11	12:58:05	60.6	64.2	67.5
0	0	11Feb 11	12:58:10	58.6	60.8	65.6
0	0	11Feb 11	12:58:15	56.7	57.7	63.6
0	0	11Feb 11	12:58:20	56.4	57.0	63.4
0	0	11Feb 11	12:58:25	57.2	60.0	64.2
0	0	11Feb 11	12:58:30	65.6	68.9	72.6
0	0	11Feb 11	12:58:35	69.7	71.7	76.7
0	0	11Feb 11	12:58:40	70.4	72.3	77.4
0	0	11Feb 11	12:58:45	67.1	69.3	74.1
0	0	11Feb 11	12:58:50	68.8	72.2	75.8
0	0	11Feb 11	12:58:55	66.2	68.6	73.2
0	0	11Feb 11	12:59:00	65.6	67.1	72.6
0	0	11Feb 11	12:59:05	65.4	66.7	72.3
0	0	11Feb 11	12:59:10	66.3	67.5	73.3
0	0	11Feb 11	12:59:15	62.0	64.7	69.0
0	0	11Feb 11	12:59:20	60.3	62.7	67.3
0	0	11Feb 11	12:59:25	59.3	62.6	66.3
0	0	11Feb 11	12:59:30	71.1	75.5	78.1
0	0	11Feb 11	12:59:35	69.5	72.7	76.5
0	0	11Feb 11	12:59:40	64.1	65.2	71.1
0	0	11Feb 11	12:59:45	62.3	63.6	69.3
0	0	11Feb 11	12:59:50	60.8	62.2	67.7
0	0	11Feb 11	12:59:55	59.0	67.1	66.0
0	0	11Feb 11	13:00:00	58.2	59.0	65.2
0	0	11Feb 11	13:00:05	58.5	59.2	65.5
0	0	11Feb 11	13:00:10	70.3	73.2	77.3
0	0	11Feb 11	13:00:15	73.1	75.5	80.1
0	0	11Feb 11	13:00:20	74.0	76.3	81.0
0	0	11Feb 11	13:00:25	70.0	70.7	77.0
0	0	11Feb 11	13:00:30	68.7	70.3	75.7
0	0	11Feb 11	13:00:35	69.4	71.5	76.4
0	0	11Feb 11	13:00:40	67.7	69.7	74.7
0	0	11Feb 11	13:00:45	67.8	70.6	74.8
0	0	11Feb 11	13:00:50	70.7	76.5	77.6
0	0	11Feb 11	13:00:55	65.9	68.7	72.9
0	0	11Feb 11	13:01:00	64.5	67.1	71.5
0	0	11Feb 11	13:01:05	61.1	63.3	68.1
0	0	11Feb 11	13:01:10	54.7	59.6	61.6
0	0	11Feb 11	13:01:15	62.2	63.7	69.2
0	0	11Feb 11	13:01:20	64.4	66.7	71.4
0	0	11Feb 11	13:01:25	69.2	72.1	76.2
0	0	11Feb 11	13:01:30	64.7	69.6	71.7
0	0	11Feb 11	13:01:35	64.0	66.0	71.0
0	0	11Feb 11	13:01:40	61.3	64.6	68.3
0	0	11Feb 11	13:01:45	56.3	65.0	63.3
0	0	11Feb 11	13:01:50	56.6	58.1	63.5
0	0	11Feb 11	13:01:55	54.2	55.7	61.1
0	0	11Feb 11	13:02:00	62.9	68.8	69.9
0	0	11Feb 11	13:02:05	68.6	70.5	75.5
0	0	11Feb 11	13:02:10	72.1	74.4	79.1
0	0	11Feb 11	13:02:15	67.9	72.2	74.9
0	0	11Feb 11	13:02:20	67.9	69.7	74.9
0	0	11Feb 11	13:02:25	66.8	69.1	73.8
0	0	11Feb 11	13:02:30	67.6	69.9	74.6
0	0	11Feb 11	13:02:35	67.7	69.5	74.7
0	0	11Feb 11	13:02:40	80.4	87.2	87.4
0	0	11Feb 11	13:02:45	75.3	78.9	82.3
0	0	11Feb 11	13:02:50	73.5	78.2	80.5
0	0	11Feb 11	13:02:55	73.5	77.1	80.5
0	0	11Feb 11	13:03:00	73.0	77.6	80.0
0	0	11Feb 11	13:03:05	71.4	73.7	78.4
0	0	11Feb 11	13:03:10	70.2	74.5	77.2
0	0	11Feb 11	13:03:15	59.8	63.1	66.8
0	0	11Feb 11	13:03:20	58.9	63.2	65.9
0	0	11Feb 11	13:03:25	60.9	64.4	67.9
0	0	11Feb 11	13:03:30	57.9	61.5	64.8
0	0	11Feb 11	13:03:35	63.7	66.9	70.6
0	0	11Feb 11	13:03:40	59.6	62.0	66.5
0	0	11Feb 11	13:03:45	64.3	67.0	71.3
0	0	11Feb 11	13:03:50	69.4	71.1	76.4
0	0	11Feb 11	13:03:55	69.2	74.7	76.2
0	0	11Feb 11	13:04:00	71.0	75.1	78.0
0	0	11Feb 11	13:04:05	67.0	70.5	74.0
0	0	11Feb 11	13:04:10	62.3	65.0	69.3
0	0	11Feb 11	13:04:15	58.1	61.5	65.1
0	0	11Feb 11	13:04:20	56.8	58.2	63.8
0	0	11Feb 11	13:04:25	59.5	62.4	66.5
0	0	11Feb 11	13:04:30	57.7	59.0	64.7
0	0	11Feb 11	13:04:35	61.1	65.0	68.1
0	0	11Feb 11	13:04:40	68.1	69.9	75.0
0	0	11Feb 11	13:04:45	69.7	72.7	76.7
0	0	11Feb 11	13:04:50	67.2	69.0	74.2
0	0	11Feb 11	13:04:55	69.9	73.0	76.9
0	0	11Feb 11	13:05:00	68.3	73.5	75.3
0	0	11Feb 11	13:05:05	71.9	74.2	78.9
0	0	11Feb 11	13:05:10	67.8	69.5	74.8
0	0	11Feb 11	13:05:15	89.6	94.7	96.6
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0	0	11Feb 11	13:05:30	70.8	74.0	77.8
0	0	11Feb 11	13:05:35	68.7	73.2	75.7
0	0	11Feb 11	13:05:40	68.7	72.4	75.7
0	0	11Feb 11	13:05:45	66.3	71.6	73.3
0	0	11Feb 11	13:05:50	54.5	58.5	61.5
0	0	11Feb 11	13:05:55	52.6	53.9	59.5
0	0	11Feb 11	13:06:00	53.1	54.2	60.1
0	0	11Feb 11	13:06:05	53.9	54.7	60.9
0	0	11Feb 11	13:06:10	56.2	61.4	63.2
0	0	11Feb 11	13:06:15	62.5	63.5	69.5
0	0	11Feb 11	13:06:20	65.9	68.1	72.8
0	0	11Feb 11	13:06:25	70.1	73.3	77.1
0	0	11Feb 11	13:06:30	70.0	72.4	77.0
0	0	11Feb 11	13:06:35	65.0	67.1	72.0
0	0	11Feb 11	13:06:40	65.1	66.8	72.1
0	0	11Feb 11	13:06:45	63.7	65.1	70.7
0	0	11Feb 11	13:06:50	61.0	63.6	68.0
0	0	11Feb 11	13:06:55	60.7	63.4	67.6
0	0	11Feb 11	13:07:00	61.7	66.6	68.7
0	0	11Feb 11	13:07:05	66.3	70.6	73.3
0	0	11Feb 11	13:07:10	60.6	62.3	67.5
0	0	11Feb 11	13:07:15	69.3	77.9	76.3
0	0	11Feb 11	13:07:20	71.7	78.6	78.7
0	0	11Feb 11	13:07:25	65.8	66.9	72.8
0	0	11Feb 11	13:07:30	66.1	67.0	73.1
0	0	11Feb 11	13:07:35	66.2	67.1	73.2
0	0	11Feb 11	13:07:40	65.6	66.1	72.5
0	0	11Feb 11	13:07:45	71.2	79.4	78.2
0	0	11Feb 11	13:07:50	74.2	78.4	81.2
0	0	11Feb 11	13:07:55	72.5	74.3	79.5
0	0	11Feb 11	13:08:00	71.1	72.5	78.0
0	0	11Feb 11	13:08:05	69.1	70.4	76.1
0	0	11Feb 11	13:08:10	66.5	67.9	73.5
0	0	11Feb 11	13:08:15	71.5	77.1	78.5
0	0	11Feb 11	13:08:20	69.3	73.2	76.3
0	0	11Feb 11	13:08:25	69.4	78.9	76.4
0	0	11Feb 11	13:08:30	65.0	67.9	72.0
0	0	11Feb 11	13:08:35	65.3	67.0	72.2
0	0	11Feb 11	13:08:40	66.2	69.8	73.2
0	0	11Feb 11	13:08:45	64.3	68.8	71.3
0	0	11Feb 11	13:08:50	65.4	69.8	72.4
0	0	11Feb 11	13:08:55	65.4	70.3	72.4
0	0	11Feb 11	13:09:00	63.7	67.9	70.7
0	0	11Feb 11	13:09:05	64.2	69.0	71.2
0	0	11Feb 11	13:09:10	63.3	66.2	70.3
0	0	11Feb 11	13:09:15	63.5	66.0	70.5
0	0	11Feb 11	13:09:20	63.0	66.6	70.0
0	0	11Feb 11	13:09:25	63.4	67.1	70.4
0	0	11Feb 11	13:09:30	70.2	74.4	77.2
0	0	11Feb 11	13:09:35	72.4	75.0	79.4
0	0	11Feb 11	13:09:40	72.1	74.3	79.1
0	0	11Feb 11	13:09:45	70.3	73.3	77.3
0	0	11Feb 11	13:09:50	70.1	71.0	77.0
0	0	11Feb 11	13:09:55	73.7	78.9	80.6
0	0	11Feb 11	13:10:00	79.2	84.6	86.2
0	0	11Feb 11	13:10:05	77.4	83.6	84.4
0	0	11Feb 11	13:10:10	73.3	75.4	80.3
0	0	11Feb 11	13:10:15	72.8	78.4	79.8
0	0	11Feb 11	13:10:20	72.4	77.3	79.4
0	0	11Feb 11	13:10:25	67.4	70.3	74.4
0	0	11Feb 11	13:10:30	64.2	66.6	71.2
0	0	11Feb 11	13:10:35	64.4	66.5	71.4
0	0	11Feb 11	13:10:40	61.2	63.1	68.2
0	0	11Feb 11	13:10:45	61.1	62.8	68.1
0	0	11Feb 11	13:10:50	63.5	65.4	70.5
0	0	11Feb 11	13:10:55	63.8	64.9	70.8
0	0	11Feb 11	13:11:00	64.8	65.9	71.8
0	0	11Feb 11	13:11:05	63.6	65.8	70.6
0	0	11Feb 11	13:11:10	64.7	66.6	71.7
0	0	11Feb 11	13:11:15	60.9	62.4	67.9
0	0	11Feb 11	13:11:20	62.0	63.1	69.0
0	0	11Feb 11	13:11:25	61.0	61.9	68.0
0	0	11Feb 11	13:11:30	60.7	62.1	67.7
0	0	11Feb 11	13:11:35	59.5	60.8	66.5
0	0	11Feb 11	13:11:40	60.9	62.6	67.9
0	0	11Feb 11	13:11:45	63.0	69.0	70.0
0	0	11Feb 11	13:11:50	61.7	62.5	68.7
0	0	11Feb 11	13:11:55	62.9	64.5	69.9
0	0	11Feb 11	13:12:00	64.5	64.5	71.5

Stop Key
Run Key
Measurement 3

0	0	11Feb 11	13:19:00	60.2	64.8	67.2
0	0	11Feb 11	13:19:05	58.8	62.4	65.8
0	0	11Feb 11	13:19:10	58.6	62.4	65.6
0	0	11Feb 11	13:19:15	52.6	53.5	59.5
0	0	11Feb 11	13:19:20	53.6	54.9	60.6
0	0	11Feb 11	13:19:25	59.7	61.9	66.7
0	0	11Feb 11	13:19:30	53.8	56.3	60.7
0	0	11Feb 11	13:19:35	53.5	55.5	60.5
0	0	11Feb 11	13:19:40	52.7	54.5	59.7
0	0	11Feb 11	13:19:45	51.8	52.9	58.8
0	0	11Feb 11	13:19:50	53.3	54.5	60.3
0	0	11Feb 11	13:19:55	55.2	57.9	62.2
0	0	11Feb 11	13:20:00	53.8	55.5	60.7
0	0	11Feb 11	13:20:05	54.0	54.8	61.0
0	0	11Feb 11	13:20:10	54.0	55.5	61.0
0	0	11Feb 11	13:20:15	58.3	64.4	65.3
0	0	11Feb 11	13:20:20	60.5	63.5	67.5
0	0	11Feb 11	13:20:25	61.1	64.0	68.0
0	0	11Feb 11	13:20:30	54.3	57.4	61.3
0	0	11Feb 11	13:20:35	58.5	62.3	65.5
0	0	11Feb 11	13:20:40	56.6	60.2	63.6
0	0	11Feb 11	13:20:45	58.3	61.0	65.3
0	0	11Feb 11	13:20:50	61.4	66.4	68.4
0	0	11Feb 11	13:20:55	69.2	71.7	76.1
0	0	11Feb 11	13:21:00	69.4	71.3	76.4
0	0	11Feb 11	13:21:05	60.5	65.7	67.5
0	0	11Feb 11	13:21:10	53.6	54.8	60.6
0	0	11Feb 11	13:21:15	57.0	63.8	64.0
0	0	11Feb 11	13:21:20	64.1	68.0	71.1
0	0	11Feb 11	13:21:25	54.0	56.8	61.0
0	0	11Feb 11	13:21:30	50.8	52.2	57.8
0	0	11Feb 11	13:21:35	51.8	52.7	58.8
0	0	11Feb 11	13:21:40	51.6	52.2	58.6
0	0	11Feb 11	13:21:45	53.4	55.7	60.4
0	0	11Feb 11	13:21:50	53.8	55.3	60.8
0	0	11Feb 11	13:21:55	54.0	56.5	61.0
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0	0	11Feb 11	13:22:05	57.6	62.2	64.5
0	0	11Feb 11	13:22:10	55.4	58.2	62.4
0	0	11Feb 11	13:22:15	56.1	58.7	63.1
0	0	11Feb 11	13:22:20	53.7	54.5	60.6
0	0	11Feb 11	13:22:25	53.3	54.8	60.3
0	0	11Feb 11	13:22:30	55.8	57.3	62.8
0	0	11Feb 11	13:22:35	57.8	60.3	64.8
0	0	11Feb 11	13:22:40	60.2	61.6	67.2
0	0	11Feb 11	13:22:45	59.8	62.7	66.8
0	0	11Feb 11	13:22:50	58.6	62.2	65.6
0	0	11Feb 11	13:22:55	61.9	64.9	68.9
0	0	11Feb 11	13:23:00	51.1	53.7	58.1
0	0	11Feb 11	13:23:05	53.3	55.2	60.3
0	0	11Feb 11	13:23:10	63.2	69.2	70.2
0	0	11Feb 11	13:23:15	71.4	72.8	78.4
0	0	11Feb 11	13:23:20	76.1	81.3	83.1
0	0	11Feb 11	13:23:25	67.2	70.1	74.2
0	0	11Feb 11	13:23:30	57.4	62.8	64.4
0	0	11Feb 11	13:23:35	52.4	53.9	59.4
0	0	11Feb 11	13:23:40	51.3	52.0	58.3
0	0	11Feb 11	13:23:45	50.6	51.2	57.5
0	0	11Feb 11	13:23:50	52.1	54.8	59.0
0	0	11Feb 11	13:23:55	61.3	64.3	68.2
0	0	11Feb 11	13:24:00	58.5	62.7	65.5
0	0	11Feb 11	13:24:05	58.1	59.9	65.1
0	0	11Feb 11	13:24:10	53.8	55.2	60.8
0	0	11Feb 11	13:24:15	55.3	58.2	62.3
0	0	11Feb 11	13:24:20	59.0	61.9	66.0
0	0	11Feb 11	13:24:25	61.0	62.4	68.0
0	0	11Feb 11	13:24:30	55.7	59.5	62.6
0	0	11Feb 11	13:24:35	68.8	73.4	75.8
0	0	11Feb 11	13:24:40	64.8	70.9	71.7
0	0	11Feb 11	13:24:45	63.0	68.0	70.0
0	0	11Feb 11	13:24:50	53.8	54.9	60.7

0	0	11Feb 11	13:24:55	61.9	65.5	68.9
0	0	11Feb 11	13:25:00	57.2	59.9	64.2
0	0	11Feb 11	13:25:05	52.5	55.8	59.5
0	0	11Feb 11	13:25:10	52.3	52.8	59.3
0	0	11Feb 11	13:25:15	52.4	52.9	59.4
0	0	11Feb 11	13:25:20	53.1	54.9	60.0
0	0	11Feb 11	13:25:25	58.6	61.7	65.6
0	0	11Feb 11	13:25:30	64.5	71.8	71.5
0	0	11Feb 11	13:25:35	73.0	74.9	80.0
0	0	11Feb 11	13:25:40	74.4	81.0	81.4
0	0	11Feb 11	13:25:45	67.9	73.7	74.9
0	0	11Feb 11	13:25:50	55.2	57.4	62.2
0	0	11Feb 11	13:25:55	56.7	59.6	63.7
0	0	11Feb 11	13:26:00	59.5	62.2	66.5
0	0	11Feb 11	13:26:05	59.3	63.8	66.2
0	0	11Feb 11	13:26:10	61.0	64.8	68.0
0	0	11Feb 11	13:26:15	57.2	60.6	64.2
0	0	11Feb 11	13:26:20	56.4	59.8	63.4
0	0	11Feb 11	13:26:25	52.0	55.9	59.0
0	0	11Feb 11	13:26:30	55.2	57.8	62.2
0	0	11Feb 11	13:26:35	58.1	61.3	65.1
0	0	11Feb 11	13:26:40	53.7	54.6	60.7
0	0	11Feb 11	13:26:45	53.4	55.3	60.4
0	0	11Feb 11	13:26:50	52.6	54.3	59.6
0	0	11Feb 11	13:26:55	53.4	55.6	60.4
0	0	11Feb 11	13:27:00	58.0	61.7	65.0
0	0	11Feb 11	13:27:05	55.5	61.9	62.5
0	0	11Feb 11	13:27:10	56.5	60.7	63.5
0	0	11Feb 11	13:27:15	61.8	64.8	68.7
0	0	11Feb 11	13:27:20	58.9	62.6	65.9
0	0	11Feb 11	13:27:25	61.9	62.9	68.9
0	0	11Feb 11	13:27:30	58.2	61.6	65.2
0	0	11Feb 11	13:27:35	59.4	61.1	66.4
0	0	11Feb 11	13:27:40	58.6	62.1	65.6
0	0	11Feb 11	13:27:45	61.3	62.8	68.3
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0	0	11Feb 11	13:27:55	69.2	72.4	76.2
0	0	11Feb 11	13:28:00	68.2	71.4	75.2
0	0	11Feb 11	13:28:05	65.0	66.2	72.0
0	0	11Feb 11	13:28:10	63.4	66.9	70.4
0	0	11Feb 11	13:28:15	67.5	70.9	74.5
0	0	11Feb 11	13:28:20	65.0	70.2	72.0
0	0	11Feb 11	13:28:25	70.5	75.1	77.5
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0	0	11Feb 11	13:28:35	59.3	63.1	66.3
0	0	11Feb 11	13:28:40	68.8	72.8	75.8
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0	0	11Feb 11	13:29:40	55.0	56.9	62.0
0	0	11Feb 11	13:29:45	58.9	61.4	65.9
0	0	11Feb 11	13:29:50	60.0	61.3	67.0
0	0	11Feb 11	13:29:55	61.2	63.2	68.2
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0	0	11Feb 11	13:30:30	54.1	56.0	61.1
0	0	11Feb 11	13:30:35	55.8	60.6	62.8
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0	0	11Feb 11	13:31:30	60.8	63.7	67.7
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0	0	11Feb 11	13:32:15	51.8	53.3	58.8
0	0	11Feb 11	13:32:20	52.5	53.8	59.5
0	0	11Feb 11	13:32:25	61.3	64.2	68.3
0	0	11Feb 11	13:32:30	62.1	68.8	69.1
0	0	11Feb 11	13:32:35	65.4	69.2	72.4
0	0	11Feb 11	13:32:40	57.4	62.5	64.4
0	0	11Feb 11	13:32:45	56.5	60.2	63.5
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0	0	11Feb 11	13:33:05	55.6	57.2	62.5
0	0	11Feb 11	13:33:10	55.6	58.0	62.5
0	0	11Feb 11	13:33:15	54.0	56.1	61.0
0	0	11Feb 11	13:33:20	53.4	55.0	60.4
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0	0	11Feb 11	13:33:30	57.2	58.7	64.2
0	0	11Feb 11	13:33:35	57.2	59.2	64.2
0	0	11Feb 11	13:33:40	54.7	58.7	61.7
0	0	11Feb 11	13:33:45	53.2	54.8	60.2
0	0	11Feb 11	13:33:50	52.5	55.0	59.5
0	0	11Feb 11	13:33:55	51.7	52.7	58.6
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0	0	11Feb 11	13:37:10	66.8	70.3	73.7
0	0	11Feb 11	13:37:15	65.4	70.0	72.4
0	0	11Feb 11	13:37:20	60.0	63.3	67.0
0	0	11Feb 11	13:37:25	57.0	58.7	64.0
0	0	11Feb 11	13:37:30	63.3	67.2	70.3
0	0	11Feb 11	13:37:35	63.7	66.7	70.7
0	0	11Feb 11	13:37:40	60.0	63.0	67.0
0	0	11Feb 11	13:37:45	55.8	58.2	62.8
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0	0	11Feb 11	13:39:25	54.0	57.1	61.0
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0	0	11Feb 11	13:40:35	49.4	50.3	56.4
0	0	11Feb 11	13:40:40	49.0	50.2	56.0
0	0	11Feb 11	13:40:45	50.0	51.2	57.0
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0	0	11Feb 11	13:43:25	57.1	60.1	64.1
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0	0	11Feb 11	13:44:20	49.9	50.7	56.9
0	0	11Feb 11	13:44:25	52.7	54.2	59.7
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0	0	11Feb 11	13:46:20	54.1	57.1	61.1
0	0	11Feb 11	13:46:25	60.8	62.4	67.8
0	0	11Feb 11	13:46:30	59.7	61.4	66.7
0	0	11Feb 11	13:46:35	67.6	70.2	74.5
0	0	11Feb 11	13:46:40	66.8	69.2	73.8
0	0	11Feb 11	13:46:45	61.9	67.1	68.9
0	0	11Feb 11	13:46:50	57.4	63.4	64.4
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0	0	11Feb 11	13:47:00	53.8	55.2	60.8

0	0	11Feb 11	13:47:05	54.0	55.3	61.0
0	0	11Feb 11	13:47:10	55.6	61.3	62.5
0	0	11Feb 11	13:47:15	55.4	56.3	62.4
0	0	11Feb 11	13:47:20	57.4	62.3	64.4
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0	0	11Feb 11	13:47:35	56.8	61.7	63.8
0	0	11Feb 11	13:47:40	66.5	71.3	73.5
0	0	11Feb 11	13:47:45	62.9	65.0	69.8
0	0	11Feb 11	13:47:50	56.2	58.2	63.2
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0	0	11Feb 11	13:48:00	57.6	60.9	64.6
0	0	11Feb 11	13:48:05	62.3	63.6	69.3
0	0	11Feb 11	13:48:10	56.7	60.5	63.7
0	0	11Feb 11	13:48:15	55.2	58.2	62.2
0	0	11Feb 11	13:48:20	55.9	57.0	62.9
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0	0	11Feb 11	13:48:35	58.0	61.3	65.0
0	0	11Feb 11	13:48:40	55.4	56.2	62.4
0	0	11Feb 11	13:48:45	57.3	61.2	64.3
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0	0	11Feb 11	13:49:10	61.1	62.8	68.1
0	0	11Feb 11	13:49:15	58.4	61.2	65.4
0	0	11Feb 11	13:49:20	55.3	56.1	62.3
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0	0	11Feb 11	13:49:35	60.2	62.0	67.2
0	0	11Feb 11	13:49:40	55.6	58.3	62.6
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0	0	11Feb 11	13:49:50	53.7	55.2	60.7
0	0	11Feb 11	13:49:55	55.7	58.7	62.6
0	0	11Feb 11	13:50:00	57.0	57.0	64.0

Stop Key

ATTACHMENT 2

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
SB La Jolla Scenic	36.0	1	35	6,257,395.5	1,897,873.4	386.00				Average	
		2	36	6,257,420.5	1,897,822.6	389.00				Average	
		3	37	6,257,467.0	1,897,706.2	394.00				Average	
		4	38	6,257,516.0	1,897,562.5	400.00				Average	
		5	39	6,257,589.5	1,897,389.9	404.00				Average	
		6	40	6,257,596.0	1,897,365.9	404.00				Average	
		7	41	6,257,632.0	1,897,274.9	404.00				Average	
		8	42	6,257,681.0	1,897,023.2	405.00				Average	
		9	43	6,257,697.5	1,896,892.2	404.00				Average	
		10	44	6,257,695.5	1,896,733.6	402.00					
NB La Jolla Scenic	36.0	1	45	6,257,743.5	1,896,732.2	403.00				Average	
		2	46	6,257,738.0	1,896,893.5	406.00				Average	
		3	47	6,257,722.5	1,897,025.8	407.00				Average	
		4	48	6,257,661.5	1,897,303.2	406.00				Average	
		5	49	6,257,616.5	1,897,451.2	404.00				Average	
		6	50	6,257,508.0	1,897,720.9	393.00				Average	
		7	51	6,257,458.0	1,897,839.8	386.00				Average	
		8	52	6,257,434.0	1,897,890.0	384.00					
SB Torrey Pines	36.0	1	58	6,256,981.0	1,897,886.8	402.00				Average	
		2	59	6,256,972.5	1,897,837.0	402.00				Average	
		3	60	6,256,954.0	1,897,727.8	400.00				Average	
		4	61	6,256,908.5	1,897,485.2	396.00				Average	
		5	62	6,256,863.0	1,897,254.5	393.00				Average	
		6	63	6,256,817.5	1,897,018.5	389.00				Average	
		7	64	6,256,774.5	1,896,797.6	387.00					

NB Torry Pines	36.0	1	65	6,256,808.0	1,896,794.4	387.00	Average
		2	66	6,256,852.5	1,897,015.2	389.00	Average
		3	67	6,256,896.5	1,897,249.1	393.00	Average
		4	68	6,256,941.0	1,897,480.8	396.00	Average
		5	69	6,256,995.5	1,897,721.2	400.00	Average
		6	70	6,257,013.5	1,897,815.4	402.00	Average
		7	71	6,257,019.0	1,897,872.8	402.00	
EB La Jolla Village	48.0	1	72	6,256,568.5	1,898,540.8	403.00	Average
		2	73	6,256,571.0	1,898,447.8	403.00	Average
		3	74	6,256,598.0	1,898,327.5	402.00	Average
		4	75	6,256,647.5	1,898,165.1	402.00	Average
		5	76	6,256,708.5	1,898,070.9	402.00	Average
		6	77	6,256,793.0	1,897,967.0	402.00	Average
		7	78	6,256,869.5	1,897,902.0	403.00	Average
		8	79	6,256,972.5	1,897,837.0	402.00	Average
		9	80	6,257,013.5	1,897,815.4	402.00	Average
		10	81	6,257,091.5	1,897,798.1	401.00	Average
		11	82	6,257,222.5	1,897,789.4	399.00	Average
		12	83	6,257,338.5	1,897,803.5	394.00	Average
		13	84	6,257,420.5	1,897,822.6	389.00	Average
		14	85	6,257,458.0	1,897,839.8	386.00	Average
		15	86	6,257,539.0	1,897,889.0	380.00	Average
		16	87	6,257,652.5	1,897,973.5	370.00	Average
		17	88	6,257,798.5	1,898,096.9	359.00	Average
		18	89	6,257,962.0	1,898,238.8	351.00	Average
		19	90	6,258,069.5	1,898,310.1	347.00	Average
		20	91	6,258,184.5	1,898,364.2	344.00	Average
		21	92	6,258,327.0	1,898,406.1	342.00	
WB La Jolla Village	48.0	1	93	6,258,328.0	1,898,430.5	342.00	Average
		2	94	6,258,178.0	1,898,391.2	346.00	Average
		3	95	6,258,057.5	1,898,338.5	350.00	Average
		4	96	6,257,942.5	1,898,274.9	353.00	Average
		5	97	6,257,770.5	1,898,143.6	359.00	Average
		6	98	6,257,617.5	1,898,015.0	369.00	Average
		7	99	6,257,512.0	1,897,937.9	377.00	Average
		8	100	6,257,434.0	1,897,890.0	384.00	Average
		9	101	6,257,395.5	1,897,873.4	386.00	Average
		10	102	6,257,332.0	1,897,854.0	391.00	Average

	11	103	6,257,225.0	1,897,843.1	396.00	Average
	12	104	6,257,090.0	1,897,854.0	401.00	Average
	13	105	6,257,019.0	1,897,872.8	402.00	Average
	14	106	6,256,981.0	1,897,886.8	402.00	Average
	15	107	6,256,897.5	1,897,939.2	402.00	Average
	16	108	6,256,823.0	1,897,998.8	400.00	Average
	17	109	6,256,743.5	1,898,089.4	399.00	Average
	18	110	6,256,689.5	1,898,181.5	400.00	Average
	19	111	6,256,631.0	1,898,337.1	400.00	Average
	20	112	6,256,611.0	1,898,453.5	400.00	Average
	21	113	6,256,606.5	1,898,542.8	401.00	

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers

Roadway Name	Points Name	No.	Segment Autos V veh/hr	Autos S mph	MTrucks V veh/hr	MTrucks S mph	HTrucks V veh/hr	HTrucks S mph	Buses V veh/hr	Buses S mph	Motorcycles V veh/hr	Motorcycles S mph
SB La Jolla Scenic	1	35	222	30	2	30	1	30	2	30	2	30
	2	36	222	30	2	30	1	30	2	30	2	30
	3	37	222	30	2	30	1	30	2	30	2	30
	4	38	222	30	2	30	1	30	2	30	2	30
	5	39	222	30	2	30	1	30	2	30	2	30
	6	40	222	30	2	30	1	30	2	30	2	30
	7	41	222	30	2	30	1	30	2	30	2	30
	8	42	222	30	2	30	1	30	2	30	2	30
	9	43	222	30	2	30	1	30	2	30	2	30
	10	44										
NB La Jolla Scenic	1	45	222	30	2	30	1	30	2	30	2	30
	2	46	222	30	2	30	1	30	2	30	2	30
	3	47	222	30	2	30	1	30	2	30	2	30
	4	48	222	30	2	30	1	30	2	30	2	30
	5	49	222	30	2	30	1	30	2	30	2	30
	6	50	222	30	2	30	1	30	2	30	2	30
	7	51	222	30	2	30	1	30	2	30	2	30
	8	52										
SB Torrey Pines	1	58	618	40	22	40	4	40	2	40	2	40
	2	59	618	40	22	40	4	40	2	40	2	40
	3	60	618	40	22	40	4	40	2	40	2	40
	4	61	618	40	22	40	4	40	2	40	2	40

	5	62	618	40	22	40	4	40	2	40	2	40
	6	63	618	40	22	40	4	40	2	40	2	40
	7	64										
NB Torry Pines	1	65	618	40	22	40	4	40	2	40	2	40
	2	66	618	40	22	40	4	40	2	40	2	40
	3	67	618	40	22	40	4	40	2	40	2	40
	4	68	618	40	22	40	4	40	2	40	2	40
	5	69	618	40	22	40	4	40	2	40	2	40
	6	70	618	40	22	40	4	40	2	40	2	40
	7	71										
EB La Jolla Village	1	72	1270	30	4	30	4	30	6	30	2	30
	2	73	1270	30	4	30	4	30	6	30	2	30
	3	74	1270	30	4	30	4	30	6	30	2	30
	4	75	1270	30	4	30	4	30	6	30	2	30
	5	76	1270	30	4	30	4	30	6	30	2	30
	6	77	1270	30	4	30	4	30	6	30	2	30
	7	78	1270	30	4	30	4	30	6	30	2	30
	8	79	1270	30	4	30	4	30	6	30	2	30
	9	80	1270	30	4	30	4	30	6	30	2	30
	10	81	1270	30	4	30	4	30	6	30	2	30
	11	82	1270	30	4	30	4	30	6	30	2	30
	12	83	1270	30	4	30	4	30	6	30	2	30
	13	84	1270	30	4	30	4	30	6	30	2	30
	14	85	1270	30	4	30	4	30	6	30	2	30
	15	86	1270	30	4	30	4	30	6	30	2	30
	16	87	1270	30	4	30	4	30	6	30	2	30
	17	88	1270	30	4	30	4	30	6	30	2	30
	18	89	1270	30	4	30	4	30	6	30	2	30
	19	90	1270	30	4	30	4	30	6	30	2	30
	20	91	1270	30	4	30	4	30	6	30	2	30
	21	92										
WB La Jolla Village	1	93	1270	30	4	30	4	30	6	30	2	30
	2	94	1270	30	4	30	4	30	6	30	2	30
	3	95	1270	30	4	30	4	30	6	30	2	30

4	96	1270	30	4	30	4	30	6	30	2	30	
5	97	1270	30	4	30	4	30	6	30	2	30	
6	98	1270	30	4	30	4	30	6	30	2	30	
7	99	1270	30	4	30	4	30	6	30	2	30	
8	100	1270	30	4	30	4	30	6	30	2	30	
9	101	1270	30	4	30	4	30	6	30	2	30	
10	102	1270	30	4	30	4	30	6	30	2	30	
11	103	1270	30	4	30	4	30	6	30	2	30	
12	104	1270	30	4	30	4	30	6	30	2	30	
13	105	1270	30	4	30	4	30	6	30	2	30	
14	106	1270	30	4	30	4	30	6	30	2	30	
15	107	1270	30	4	30	4	30	6	30	2	30	
16	108	1270	30	4	30	4	30	6	30	2	30	
17	109	1270	30	4	30	4	30	6	30	2	30	
18	110	1270	30	4	30	4	30	6	30	2	30	
19	111	1270	30	4	30	4	30	6	30	2	30	
20	112	1270	30	4	30	4	30	6	30	2	30	
21	113											

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1	1	1	6,257,197.5	1,897,748.1	402.00	5.00	0.00	66	10.0	8.0	Y
2	2	1	6,257,015.0	1,897,719.5	401.00	5.00	0.00	66	10.0	8.0	Y
3	4	1	6,257,469.5	1,897,561.5	402.00	5.00	0.00	66	10.0	8.0	Y

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers
BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 64 deg F, 69% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1	1	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
2	2	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0
3	4	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	3	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ATTACHMENT 3

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
SB La Jolla Scenic	36.0	1	35	6,257,395.5	1,897,873.4	386.00				Average	
		2	36	6,257,420.5	1,897,822.6	389.00				Average	
		3	37	6,257,467.0	1,897,706.2	394.00				Average	
		4	38	6,257,516.0	1,897,562.5	400.00				Average	
		5	39	6,257,589.5	1,897,389.9	404.00				Average	
		6	40	6,257,596.0	1,897,365.9	404.00				Average	
		7	41	6,257,632.0	1,897,274.9	404.00				Average	
		8	42	6,257,681.0	1,897,023.2	405.00				Average	
		9	43	6,257,697.5	1,896,892.2	404.00				Average	
		10	44	6,257,695.5	1,896,733.6	402.00					
NB La Jolla Scenic	36.0	1	45	6,257,743.5	1,896,732.2	403.00				Average	
		2	46	6,257,738.0	1,896,893.5	406.00				Average	
		3	47	6,257,722.5	1,897,025.8	407.00				Average	
		4	48	6,257,661.5	1,897,303.2	406.00				Average	
		5	49	6,257,616.5	1,897,451.2	404.00				Average	
		6	50	6,257,508.0	1,897,720.9	393.00				Average	
		7	51	6,257,458.0	1,897,839.8	386.00				Average	
		8	52	6,257,434.0	1,897,890.0	384.00					
SB Torrey Pines	36.0	1	58	6,256,981.0	1,897,886.8	402.00				Average	
		2	59	6,256,972.5	1,897,837.0	402.00				Average	
		3	60	6,256,954.0	1,897,727.8	400.00				Average	
		4	61	6,256,908.5	1,897,485.2	396.00				Average	
		5	62	6,256,863.0	1,897,254.5	393.00				Average	
		6	63	6,256,817.5	1,897,018.5	389.00				Average	
		7	64	6,256,774.5	1,896,797.6	387.00					

NB Torry Pines	36.0	1	65	6,256,808.0	1,896,794.4	387.00	Average
		2	66	6,256,852.5	1,897,015.2	389.00	Average
		3	67	6,256,896.5	1,897,249.1	393.00	Average
		4	68	6,256,941.0	1,897,480.8	396.00	Average
		5	69	6,256,995.5	1,897,721.2	400.00	Average
		6	70	6,257,013.5	1,897,815.4	402.00	Average
		7	71	6,257,019.0	1,897,872.8	402.00	
EB La Jolla Village	48.0	1	72	6,256,568.5	1,898,540.8	403.00	Average
		2	73	6,256,571.0	1,898,447.8	403.00	Average
		3	74	6,256,598.0	1,898,327.5	402.00	Average
		4	75	6,256,647.5	1,898,165.1	402.00	Average
		5	76	6,256,708.5	1,898,070.9	402.00	Average
		6	77	6,256,793.0	1,897,967.0	402.00	Average
		7	78	6,256,869.5	1,897,902.0	403.00	Average
		8	79	6,256,972.5	1,897,837.0	402.00	Average
		9	80	6,257,013.5	1,897,815.4	402.00	Average
		10	81	6,257,091.5	1,897,798.1	401.00	Average
		11	82	6,257,222.5	1,897,789.4	399.00	Average
		12	83	6,257,338.5	1,897,803.5	394.00	Average
		13	84	6,257,420.5	1,897,822.6	389.00	Average
		14	85	6,257,458.0	1,897,839.8	386.00	Average
		15	86	6,257,539.0	1,897,889.0	380.00	Average
		16	87	6,257,652.5	1,897,973.5	370.00	Average
		17	88	6,257,798.5	1,898,096.9	359.00	Average
		18	89	6,257,962.0	1,898,238.8	351.00	Average
		19	90	6,258,069.5	1,898,310.1	347.00	Average
		20	91	6,258,184.5	1,898,364.2	344.00	Average
		21	92	6,258,327.0	1,898,406.1	342.00	
WB La Jolla Village	48.0	1	93	6,258,328.0	1,898,430.5	342.00	Average
		2	94	6,258,178.0	1,898,391.2	346.00	Average
		3	95	6,258,057.5	1,898,338.5	350.00	Average
		4	96	6,257,942.5	1,898,274.9	353.00	Average
		5	97	6,257,770.5	1,898,143.6	359.00	Average
		6	98	6,257,617.5	1,898,015.0	369.00	Average
		7	99	6,257,512.0	1,897,937.9	377.00	Average
		8	100	6,257,434.0	1,897,890.0	384.00	Average
		9	101	6,257,395.5	1,897,873.4	386.00	Average
		10	102	6,257,332.0	1,897,854.0	391.00	Average

	11	103	6,257,225.0	1,897,843.1	396.00	Average
	12	104	6,257,090.0	1,897,854.0	401.00	Average
	13	105	6,257,019.0	1,897,872.8	402.00	Average
	14	106	6,256,981.0	1,897,886.8	402.00	Average
	15	107	6,256,897.5	1,897,939.2	402.00	Average
	16	108	6,256,823.0	1,897,998.8	400.00	Average
	17	109	6,256,743.5	1,898,089.4	399.00	Average
	18	110	6,256,689.5	1,898,181.5	400.00	Average
	19	111	6,256,631.0	1,898,337.1	400.00	Average
	20	112	6,256,611.0	1,898,453.5	400.00	Average
	21	113	6,256,606.5	1,898,542.8	401.00	

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers

Roadway Name	Points Name	No.	Segment Autos V veh/hr	Autos S mph	MTrucks V veh/hr	MTrucks S mph	HTrucks V veh/hr	HTrucks S mph	Buses V veh/hr	Buses S mph	Motorcycles V veh/hr	Motorcycles S mph
SB La Jolla Scenic	1	35	333	35	2	35	2	35	2	35	3	35
	2	36	333	35	2	35	2	35	2	35	3	35
	3	37	333	35	2	35	2	35	2	35	3	35
	4	38	333	35	2	35	2	35	2	35	3	35
	5	39	333	35	2	35	2	35	2	35	3	35
	6	40	333	35	2	35	2	35	2	35	3	35
	7	41	333	35	2	35	2	35	2	35	3	35
	8	42	333	35	2	35	2	35	2	35	3	35
	9	43	333	35	2	35	2	35	2	35	3	35
	10	44										
NB La Jolla Scenic	1	45	333	35	2	35	2	35	2	35	3	35
	2	46	333	35	2	35	2	35	2	35	3	35
	3	47	333	35	2	35	2	35	2	35	3	35
	4	48	333	35	2	35	2	35	2	35	3	35
	5	49	333	35	2	35	2	35	2	35	3	35
	6	50	333	35	2	35	2	35	2	35	3	35
	7	51	333	35	2	35	2	35	2	35	3	35
	8	52										
SB Torrey Pines	1	58	883	45	8	45	5	45	3	45	3	45
	2	59	883	45	8	45	5	45	3	45	3	45
	3	60	883	45	8	45	5	45	3	45	3	45
	4	61	883	45	8	45	5	45	3	45	3	45

	5	62	883	45	8	45	5	45	3	45	3	45
	6	63	883	45	8	45	5	45	3	45	3	45
	7	64										
NB Torry Pines	1	65	883	45	8	45	5	45	3	45	3	45
	2	66	883	45	8	45	5	45	3	45	3	45
	3	67	883	45	8	45	5	45	3	45	3	45
	4	68	883	45	8	45	5	45	3	45	3	45
	5	69	883	45	8	45	5	45	3	45	3	45
	6	70	883	45	8	45	5	45	3	45	3	45
	7	71										
EB La Jolla Village	1	72	1560	40	5	40	3	40	8	40	3	40
	2	73	1560	40	5	40	3	40	8	40	3	40
	3	74	1560	40	5	40	3	40	8	40	3	40
	4	75	1560	40	5	40	3	40	8	40	3	40
	5	76	1560	40	5	40	3	40	8	40	3	40
	6	77	1560	40	5	40	3	40	8	40	3	40
	7	78	1560	40	5	40	3	40	8	40	3	40
	8	79	1560	40	5	40	3	40	8	40	3	40
	9	80	1560	40	5	40	3	40	8	40	3	40
	10	81	1560	40	5	40	3	40	8	40	3	40
	11	82	1560	40	5	40	3	40	8	40	3	40
	12	83	1560	40	5	40	3	40	8	40	3	40
	13	84	1560	40	5	40	3	40	8	40	3	40
	14	85	1560	40	5	40	3	40	8	40	3	40
	15	86	1560	40	5	40	3	40	8	40	3	40
	16	87	1560	40	5	40	3	40	8	40	3	40
	17	88	1560	40	5	40	3	40	8	40	3	40
	18	89	1560	40	5	40	3	40	8	40	3	40
	19	90	1560	40	5	40	3	40	8	40	3	40
	20	91	1560	40	5	40	3	40	8	40	3	40
	21	92										
WB La Jolla Village	1	93	1560	40	5	40	3	40	8	40	3	40
	2	94	1560	40	5	40	3	40	8	40	3	40
	3	95	1560	40	5	40	3	40	8	40	3	40

	4	96	1560	40	5	40	3	40	8	40	3	40
	5	97	1560	40	5	40	3	40	8	40	3	40
	6	98	1560	40	5	40	3	40	8	40	3	40
	7	99	1560	40	5	40	3	40	8	40	3	40
	8	100	1560	40	5	40	3	40	8	40	3	40
	9	101	1560	40	5	40	3	40	8	40	3	40
	10	102	1560	40	5	40	3	40	8	40	3	40
	11	103	1560	40	5	40	3	40	8	40	3	40
	12	104	1560	40	5	40	3	40	8	40	3	40
	13	105	1560	40	5	40	3	40	8	40	3	40
	14	106	1560	40	5	40	3	40	8	40	3	40
	15	107	1560	40	5	40	3	40	8	40	3	40
	16	108	1560	40	5	40	3	40	8	40	3	40
	17	109	1560	40	5	40	3	40	8	40	3	40
	18	110	1560	40	5	40	3	40	8	40	3	40
	19	111	1560	40	5	40	3	40	8	40	3	40
	20	112	1560	40	5	40	3	40	8	40	3	40
	21	113										

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1	6	1	6,257,451.0	1,897,570.5	402.00	5.00	0.00	66	10.0	8.0	Y
2	7	1	6,257,472.0	1,897,598.0	403.00	5.00	0.00	66	10.0	8.0	Y
3	8	1	6,257,444.5	1,897,601.4	403.00	5.00	0.00	66	10.0	8.0	Y
4	9	1	6,257,457.0	1,897,633.4	403.00	5.00	0.00	66	10.0	8.0	Y
5	10	1	6,257,417.0	1,897,618.6	403.00	5.00	0.00	66	10.0	8.0	Y
6	11	1	6,257,400.0	1,897,598.0	402.00	5.00	0.00	66	10.0	8.0	Y
7	12	1	6,257,361.0	1,897,618.6	402.00	5.00	0.00	66	10.0	8.0	Y
8	13	1	6,257,385.0	1,897,642.6	403.00	5.00	0.00	66	10.0	8.0	Y
9	14	1	6,257,429.5	1,897,649.5	403.00	5.00	0.00	66	10.0	8.0	Y
10	15	1	6,257,446.5	1,897,690.6	396.00	5.00	0.00	66	10.0	8.0	Y
11	16	1	6,257,413.5	1,897,687.1	403.00	5.00	0.00	66	10.0	8.0	Y
12	17	1	6,257,428.5	1,897,735.1	394.00	5.00	0.00	66	10.0	8.0	Y
13	18	1	6,257,411.0	1,897,720.4	403.00	5.00	0.00	66	10.0	8.0	Y
14	19	1	6,257,375.5	1,897,700.9	403.00	5.00	0.00	66	10.0	8.0	Y
15	20	1	6,257,366.5	1,897,671.1	403.00	5.00	0.00	66	10.0	8.0	Y
16	21	1	6,257,334.5	1,897,656.2	403.00	5.00	0.00	66	10.0	8.0	Y
17	22	1	6,257,298.0	1,897,652.9	402.00	5.00	0.00	66	10.0	8.0	Y
18	23	1	6,257,317.5	1,897,686.0	403.00	5.00	0.00	66	10.0	8.0	Y
19	24	1	6,257,342.5	1,897,707.8	403.00	5.00	0.00	66	10.0	8.0	Y
20	25	1	6,257,372.5	1,897,730.6	403.00	5.00	0.00	66	10.0	8.0	Y
21	26	1	6,257,350.5	1,897,754.6	403.00	5.00	0.00	66	10.0	8.0	Y
22	27	1	6,257,394.0	1,897,748.9	403.00	5.00	0.00	66	10.0	8.0	Y

23	28	1	6,257,401.0	1,897,777.5	394.00	5.00	0.00	66	10.0	8.0	Y
24	29	1	6,257,303.5	1,897,759.2	398.00	5.00	0.00	66	10.0	8.0	Y
25	30	1	6,257,319.5	1,897,731.8	403.00	5.00	0.00	66	10.0	8.0	Y
26	31	1	6,257,276.5	1,897,720.4	403.00	5.00	0.00	66	10.0	8.0	Y
27	32	1	6,257,273.0	1,897,683.8	403.00	5.00	0.00	66	10.0	8.0	Y
28	33	1	6,257,235.0	1,897,688.2	402.00	5.00	0.00	66	10.0	8.0	Y
29	34	1	6,257,246.5	1,897,714.6	403.00	5.00	0.00	66	10.0	8.0	Y
30	35	1	6,257,257.0	1,897,740.9	403.00	5.00	0.00	66	10.0	8.0	Y
31	36	1	6,257,236.5	1,897,753.5	400.00	5.00	0.00	66	10.0	8.0	Y
32	37	1	6,257,202.0	1,897,760.4	400.00	5.00	0.00	66	10.0	8.0	Y
33	38	1	6,257,209.0	1,897,732.9	403.00	5.00	0.00	66	10.0	8.0	Y
34	39	1	6,257,186.0	1,897,714.6	403.00	5.00	0.00	66	10.0	8.0	Y
35	40	1	6,257,170.0	1,897,728.4	403.00	5.00	0.00	66	10.0	8.0	Y
36	41	1	6,257,171.0	1,897,750.0	403.00	5.00	0.00	66	10.0	8.0	Y
37	42	1	6,257,146.0	1,897,762.6	401.00	5.00	0.00	66	10.0	8.0	Y
38	43	1	6,257,103.5	1,897,764.9	401.00	5.00	0.00	66	10.0	8.0	Y
39	44	1	6,257,118.5	1,897,722.6	402.00	5.00	0.00	66	10.0	8.0	Y
40	45	1	6,257,090.0	1,897,745.5	402.00	5.00	0.00	66	10.0	8.0	Y
41	46	1	6,257,091.0	1,897,727.1	402.00	5.00	0.00	66	10.0	8.0	Y
42	47	1	6,257,038.5	1,897,734.0	402.00	5.00	0.00	66	10.0	8.0	Y
43	48	1	6,257,047.5	1,897,766.0	402.00	5.00	0.00	66	10.0	8.0	Y
44	49	1	6,257,059.0	1,897,753.5	402.00	5.00	0.00	66	10.0	8.0	Y
45	50	1	6,257,070.5	1,897,729.5	402.00	5.00	0.00	66	10.0	8.0	Y
46	51	1	6,257,299.0	1,897,698.6	403.00	5.00	0.00	66	10.0	8.0	Y
47	52	1	6,257,402.0	1,897,664.2	403.00	5.00	0.00	66	10.0	8.0	Y
48	53	1	6,257,456.0	1,897,658.6	398.00	5.00	0.00	66	10.0	8.0	Y
49	54	1	6,257,133.5	1,897,706.6	402.00	5.00	0.00	66	10.0	8.0	Y
50	55	1	6,257,222.5	1,897,711.1	403.00	5.00	0.00	66	10.0	8.0	Y

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers
BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 64 deg F, 69% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1	6	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
2	7	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
3	8	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
4	9	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
5	10	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
6	11	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
7	12	1	0.0	65.2	66	65.2	10	----	65.2	0.0	8	-8.0
8	13	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
9	14	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
10	15	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
11	16	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
12	17	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
13	18	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
14	19	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
15	20	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
16	21	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
17	22	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
18	23	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
19	24	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
20	25	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0
21	26	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0
22	27	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0
23	28	1	0.0	70.9	66	70.9	10	Snd Lvl	70.9	0.0	8	-8.0

24	29	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0
25	30	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
26	31	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
27	32	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
28	33	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
29	34	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
30	35	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0
31	36	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0
32	37	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
33	38	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
34	39	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
35	40	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0
36	41	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0
37	42	1	0.0	71.6	66	71.6	10	Snd Lvl	71.6	0.0	8	-8.0
38	43	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0
39	44	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
40	45	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0
41	46	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0
42	47	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
43	48	1	0.0	72.3	66	72.3	10	Snd Lvl	72.3	0.0	8	-8.0
44	49	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0
45	50	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0
46	51	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
47	52	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
48	53	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
49	54	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
50	55	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	50	0.0	0.0	0.0
All Impacted	44	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ATTACHMENT 4

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Flow Control Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	Segment On Struct?
	ft			ft	ft	ft		mph	%		
SB La Jolla Scenic	36.0	1	35	6,257,395.5	1,897,873.4	386.00				Average	
		2	36	6,257,420.5	1,897,822.6	389.00				Average	
		3	37	6,257,467.0	1,897,706.2	394.00				Average	
		4	38	6,257,516.0	1,897,562.5	400.00				Average	
		5	39	6,257,589.5	1,897,389.9	404.00				Average	
		6	40	6,257,596.0	1,897,365.9	404.00				Average	
		7	41	6,257,632.0	1,897,274.9	404.00				Average	
		8	42	6,257,681.0	1,897,023.2	405.00				Average	
		9	43	6,257,697.5	1,896,892.2	404.00				Average	
		10	44	6,257,695.5	1,896,733.6	402.00					
NB La Jolla Scenic	36.0	1	45	6,257,743.5	1,896,732.2	403.00				Average	
		2	46	6,257,738.0	1,896,893.5	406.00				Average	
		3	47	6,257,722.5	1,897,025.8	407.00				Average	
		4	48	6,257,661.5	1,897,303.2	406.00				Average	
		5	49	6,257,616.5	1,897,451.2	404.00				Average	
		6	50	6,257,508.0	1,897,720.9	393.00				Average	
		7	51	6,257,458.0	1,897,839.8	386.00				Average	
		8	52	6,257,434.0	1,897,890.0	384.00					
SB Torrey Pines	36.0	1	58	6,256,981.0	1,897,886.8	402.00				Average	
		2	59	6,256,972.5	1,897,837.0	402.00				Average	
		3	60	6,256,954.0	1,897,727.8	400.00				Average	
		4	61	6,256,908.5	1,897,485.2	396.00				Average	
		5	62	6,256,863.0	1,897,254.5	393.00				Average	
		6	63	6,256,817.5	1,897,018.5	389.00				Average	
		7	64	6,256,774.5	1,896,797.6	387.00					

NB Torry Pines	36.0	1	65	6,256,808.0	1,896,794.4	387.00	Average
		2	66	6,256,852.5	1,897,015.2	389.00	Average
		3	67	6,256,896.5	1,897,249.1	393.00	Average
		4	68	6,256,941.0	1,897,480.8	396.00	Average
		5	69	6,256,995.5	1,897,721.2	400.00	Average
		6	70	6,257,013.5	1,897,815.4	402.00	Average
		7	71	6,257,019.0	1,897,872.8	402.00	
EB La Jolla Village	48.0	1	72	6,256,568.5	1,898,540.8	403.00	Average
		2	73	6,256,571.0	1,898,447.8	403.00	Average
		3	74	6,256,598.0	1,898,327.5	402.00	Average
		4	75	6,256,647.5	1,898,165.1	402.00	Average
		5	76	6,256,708.5	1,898,070.9	402.00	Average
		6	77	6,256,793.0	1,897,967.0	402.00	Average
		7	78	6,256,869.5	1,897,902.0	403.00	Average
		8	79	6,256,972.5	1,897,837.0	402.00	Average
		9	80	6,257,013.5	1,897,815.4	402.00	Average
		10	81	6,257,091.5	1,897,798.1	401.00	Average
		11	82	6,257,222.5	1,897,789.4	399.00	Average
		12	83	6,257,338.5	1,897,803.5	394.00	Average
		13	84	6,257,420.5	1,897,822.6	389.00	Average
		14	85	6,257,458.0	1,897,839.8	386.00	Average
		15	86	6,257,539.0	1,897,889.0	380.00	Average
		16	87	6,257,652.5	1,897,973.5	370.00	Average
		17	88	6,257,798.5	1,898,096.9	359.00	Average
		18	89	6,257,962.0	1,898,238.8	351.00	Average
		19	90	6,258,069.5	1,898,310.1	347.00	Average
		20	91	6,258,184.5	1,898,364.2	344.00	Average
		21	92	6,258,327.0	1,898,406.1	342.00	
WB La Jolla Village	48.0	1	93	6,258,328.0	1,898,430.5	342.00	Average
		2	94	6,258,178.0	1,898,391.2	346.00	Average
		3	95	6,258,057.5	1,898,338.5	350.00	Average
		4	96	6,257,942.5	1,898,274.9	353.00	Average
		5	97	6,257,770.5	1,898,143.6	359.00	Average
		6	98	6,257,617.5	1,898,015.0	369.00	Average
		7	99	6,257,512.0	1,897,937.9	377.00	Average
		8	100	6,257,434.0	1,897,890.0	384.00	Average
		9	101	6,257,395.5	1,897,873.4	386.00	Average
		10	102	6,257,332.0	1,897,854.0	391.00	Average

	11	103	6,257,225.0	1,897,843.1	396.00		Average
	12	104	6,257,090.0	1,897,854.0	401.00		Average
	13	105	6,257,019.0	1,897,872.8	402.00		Average
	14	106	6,256,981.0	1,897,886.8	402.00		Average
	15	107	6,256,897.5	1,897,939.2	402.00		Average
	16	108	6,256,823.0	1,897,998.8	400.00		Average
	17	109	6,256,743.5	1,898,089.4	399.00		Average
	18	110	6,256,689.5	1,898,181.5	400.00		Average
	19	111	6,256,631.0	1,898,337.1	400.00		Average
	20	112	6,256,611.0	1,898,453.5	400.00		Average
	21	113	6,256,606.5	1,898,542.8	401.00		

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Roadway Name	Points Name	No.	Segment Autos V veh/hr	Autos S mph	MTrucks V veh/hr	MTrucks S mph	HTrucks V veh/hr	HTrucks S mph	Buses V veh/hr	Buses S mph	Motorcycles V veh/hr	Motorcycles S mph
SB La Jolla Scenic	1	35	333	35	2	35	2	35	2	35	3	35
	2	36	333	35	2	35	2	35	2	35	3	35
	3	37	333	35	2	35	2	35	2	35	3	35
	4	38	333	35	2	35	2	35	2	35	3	35
	5	39	333	35	2	35	2	35	2	35	3	35
	6	40	333	35	2	35	2	35	2	35	3	35
	7	41	333	35	2	35	2	35	2	35	3	35
	8	42	333	35	2	35	2	35	2	35	3	35
	9	43	333	35	2	35	2	35	2	35	3	35
	10	44										
NB La Jolla Scenic	1	45	333	35	2	35	2	35	2	35	3	35
	2	46	333	35	2	35	2	35	2	35	3	35
	3	47	333	35	2	35	2	35	2	35	3	35
	4	48	333	35	2	35	2	35	2	35	3	35
	5	49	333	35	2	35	2	35	2	35	3	35
	6	50	333	35	2	35	2	35	2	35	3	35
	7	51	333	35	2	35	2	35	2	35	3	35
	8	52										
SB Torrey Pines	1	58	883	45	8	45	5	45	3	45	3	45
	2	59	883	45	8	45	5	45	3	45	3	45
	3	60	883	45	8	45	5	45	3	45	3	45
	4	61	883	45	8	45	5	45	3	45	3	45

	5	62	883	45	8	45	5	45	3	45	3	45
	6	63	883	45	8	45	5	45	3	45	3	45
	7	64										
NB Torry Pines	1	65	883	45	8	45	5	45	3	45	3	45
	2	66	883	45	8	45	5	45	3	45	3	45
	3	67	883	45	8	45	5	45	3	45	3	45
	4	68	883	45	8	45	5	45	3	45	3	45
	5	69	883	45	8	45	5	45	3	45	3	45
	6	70	883	45	8	45	5	45	3	45	3	45
	7	71										
EB La Jolla Village	1	72	1560	40	5	40	3	40	8	40	3	40
	2	73	1560	40	5	40	3	40	8	40	3	40
	3	74	1560	40	5	40	3	40	8	40	3	40
	4	75	1560	40	5	40	3	40	8	40	3	40
	5	76	1560	40	5	40	3	40	8	40	3	40
	6	77	1560	40	5	40	3	40	8	40	3	40
	7	78	1560	40	5	40	3	40	8	40	3	40
	8	79	1560	40	5	40	3	40	8	40	3	40
	9	80	1560	40	5	40	3	40	8	40	3	40
	10	81	1560	40	5	40	3	40	8	40	3	40
	11	82	1560	40	5	40	3	40	8	40	3	40
	12	83	1560	40	5	40	3	40	8	40	3	40
	13	84	1560	40	5	40	3	40	8	40	3	40
	14	85	1560	40	5	40	3	40	8	40	3	40
	15	86	1560	40	5	40	3	40	8	40	3	40
	16	87	1560	40	5	40	3	40	8	40	3	40
	17	88	1560	40	5	40	3	40	8	40	3	40
	18	89	1560	40	5	40	3	40	8	40	3	40
	19	90	1560	40	5	40	3	40	8	40	3	40
	20	91	1560	40	5	40	3	40	8	40	3	40
	21	92										
WB La Jolla Village	1	93	1560	40	5	40	3	40	8	40	3	40
	2	94	1560	40	5	40	3	40	8	40	3	40
	3	95	1560	40	5	40	3	40	8	40	3	40

	4	96	1560	40	5	40	3	40	8	40	3	40
	5	97	1560	40	5	40	3	40	8	40	3	40
	6	98	1560	40	5	40	3	40	8	40	3	40
	7	99	1560	40	5	40	3	40	8	40	3	40
	8	100	1560	40	5	40	3	40	8	40	3	40
	9	101	1560	40	5	40	3	40	8	40	3	40
	10	102	1560	40	5	40	3	40	8	40	3	40
	11	103	1560	40	5	40	3	40	8	40	3	40
	12	104	1560	40	5	40	3	40	8	40	3	40
	13	105	1560	40	5	40	3	40	8	40	3	40
	14	106	1560	40	5	40	3	40	8	40	3	40
	15	107	1560	40	5	40	3	40	8	40	3	40
	16	108	1560	40	5	40	3	40	8	40	3	40
	17	109	1560	40	5	40	3	40	8	40	3	40
	18	110	1560	40	5	40	3	40	8	40	3	40
	19	111	1560	40	5	40	3	40	8	40	3	40
	20	112	1560	40	5	40	3	40	8	40	3	40
	21	113										

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1	57	1	6,257,287.0	1,897,696.5	403.00	5.00	0.00	66	10.0	8.0	Y
2	58	1	6,257,346.0	1,897,664.5	403.00	5.00	0.00	66	10.0	8.0	Y
3	59	1	6,257,393.5	1,897,748.5	403.00	5.00	0.00	66	10.0	8.0	Y

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Jessica Fleming

29 April 2008
TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Barrier Name	Type	Height Min	Height Max	If Wall $ per Unit Area	If Berm $ per Unit Vol.	Top Width	Run:Rise	Add'tnl $ per Unit Length	Points Name	No.	Coordinates (bottom) X	Y	Z	Height at Point	Segment Seg Ht Incre-ment	Perturbs #Up	#Dn	On Struct?	Important Reflec-tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Building	W	0.00	99.99	0.00				0.00	1	6	6,257,256.5	1,897,739.8	403.00	23.00	0.00	0	0		
									2	7	6,257,265.5	1,897,739.8	403.00	23.00	0.00	0	0		
									3	8	6,257,265.5	1,897,741.2	403.00	23.00	0.00	0	0		
									4	9	6,257,319.5	1,897,740.8	403.00	23.00	0.00	0	0		
									5	10	6,257,319.5	1,897,740.2	403.00	23.00	0.00	0	0		
									6	11	6,257,340.0	1,897,743.6	403.00	23.00	0.00	0	0		
									7	12	6,257,339.0	1,897,749.9	403.00	23.00	0.00	0	0		
									8	13	6,257,369.5	1,897,754.9	403.00	23.00	0.00	0	0		
									9	14	6,257,372.5	1,897,738.9	403.00	23.00	0.00	0	0		
									10	15	6,257,382.0	1,897,739.0	403.00	23.00	0.00	0	0		
									11	16	6,257,389.0	1,897,730.8	403.00	23.00	0.00	0	0		
									12	17	6,257,400.0	1,897,722.8	403.00	23.00	0.00	0	0		
									13	18	6,257,409.0	1,897,718.5	403.00	23.00	0.00	0	0		
									14	19	6,257,411.5	1,897,713.1	403.00	23.00	0.00	0	0		
									15	20	6,257,417.0	1,897,714.9	403.00	23.00	0.00	0	0		
									16	21	6,257,449.5	1,897,632.5	403.00	23.00	0.00	0	0		
									17	22	6,257,430.0	1,897,616.4	403.00	23.00	0.00	0	0		
									18	23	6,257,394.0	1,897,638.2	403.00	23.00	0.00	0	0		
									19	24	6,257,391.5	1,897,634.1	403.00	23.00	0.00	0	0		
									20	25	6,257,355.5	1,897,656.2	403.00	23.00	0.00	0	0		
									21	26	6,257,366.0	1,897,673.6	403.00	23.00	0.00	0	0		
									22	27	6,257,362.5	1,897,682.1	403.00	23.00	0.00	0	0		
									23	28	6,257,345.0	1,897,681.8	403.00	23.00	0.00	0	0		
									24	29	6,257,344.5	1,897,670.2	403.00	23.00	0.00	0	0		
									25	30	6,257,320.0	1,897,669.9	403.00	23.00	0.00	0	0		
									26	31	6,257,320.0	1,897,685.8	403.00	23.00	0.00	0	0		
									27	32	6,257,291.5	1,897,686.0	403.00	23.00	0.00	0	0		
									28	33	6,257,292.5	1,897,702.0	403.00	23.00	0.00	0	0		
									29	34	6,257,265.5	1,897,702.2	403.00	23.00	0.00	0	0		
									30	35	6,257,266.0	1,897,719.0	403.00	23.00	0.00	0	0		
									31	36	6,257,256.0	1,897,719.1	403.00	23.00	0.00	0	0		
									1	37	6,257,256.5	1,897,739.8	403.00	23.00					
Barrier	W	0.00	99.99	0.00				0.00	1	38	6,257,370.0	1,897,754.1	403.00	6.00	1.00	3	3		
									2	39	6,257,389.5	1,897,757.5	403.00	6.00	1.00	3	3		
									3	40	6,257,402.5	1,897,751.0	403.00	6.00	1.00	3	3		

					4	41	6,257,415.5	1,897,719.8	403.00	6.00

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers
BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 64 deg F, 69% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1	57	1	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
2	58	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
3	59	1	0.0	68.6	66	68.6	10	Snd Lvl	58.9	9.7	8	1.7

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	3.2	9.7
All Impacted	1	9.7	9.7	9.7
All that meet NR Goal	1	9.7	9.7	9.7

ATTACHMENT 4

Recon Environmental
Jessica Fleming

18 February 2010
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 4609-1N
RUN: Hillel - Modeled Receivers

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
SB La Jolla Scenic	36.0	1	35	6,257,395.5	1,897,873.4	386.00				Average	
		2	36	6,257,420.5	1,897,822.6	389.00				Average	
		3	37	6,257,467.0	1,897,706.2	394.00				Average	
		4	38	6,257,516.0	1,897,562.5	400.00				Average	
		5	39	6,257,589.5	1,897,389.9	404.00				Average	
		6	40	6,257,596.0	1,897,365.9	404.00				Average	
		7	41	6,257,632.0	1,897,274.9	404.00				Average	
		8	42	6,257,681.0	1,897,023.2	405.00				Average	
		9	43	6,257,697.5	1,896,892.2	404.00				Average	
		10	44	6,257,695.5	1,896,733.6	402.00					
NB La Jolla Scenic	36.0	1	45	6,257,743.5	1,896,732.2	403.00				Average	
		2	46	6,257,738.0	1,896,893.5	406.00				Average	
		3	47	6,257,722.5	1,897,025.8	407.00				Average	
		4	48	6,257,661.5	1,897,303.2	406.00				Average	
		5	49	6,257,616.5	1,897,451.2	404.00				Average	
		6	50	6,257,508.0	1,897,720.9	393.00				Average	
		7	51	6,257,458.0	1,897,839.8	386.00				Average	
		8	52	6,257,434.0	1,897,890.0	384.00					
SB Torrey Pines	36.0	1	58	6,256,981.0	1,897,886.8	402.00				Average	
		2	59	6,256,972.5	1,897,837.0	402.00				Average	
		3	60	6,256,954.0	1,897,727.8	400.00				Average	
		4	61	6,256,908.5	1,897,485.2	396.00				Average	
		5	62	6,256,863.0	1,897,254.5	393.00				Average	
		6	63	6,256,817.5	1,897,018.5	389.00				Average	
		7	64	6,256,774.5	1,896,797.6	387.00					

NB Torry Pines	36.0	1	65	6,256,808.0	1,896,794.4	387.00				Average	
		2	66	6,256,852.5	1,897,015.2	389.00				Average	
		3	67	6,256,896.5	1,897,249.1	393.00				Average	
		4	68	6,256,941.0	1,897,480.8	396.00				Average	
		5	69	6,256,995.5	1,897,721.2	400.00				Average	
		6	70	6,257,013.5	1,897,815.4	402.00				Average	
		7	71	6,257,019.0	1,897,872.8	402.00					
EB La Jolla Village	48.0	1	72	6,256,568.5	1,898,540.8	403.00				Average	
		2	73	6,256,571.0	1,898,447.8	403.00				Average	
		3	74	6,256,598.0	1,898,327.5	402.00				Average	
		4	75	6,256,647.5	1,898,165.1	402.00				Average	
		5	76	6,256,708.5	1,898,070.9	402.00				Average	
		6	77	6,256,793.0	1,897,967.0	402.00				Average	
		7	78	6,256,869.5	1,897,902.0	403.00				Average	
		8	79	6,256,972.5	1,897,837.0	402.00				Average	
		9	80	6,257,013.5	1,897,815.4	402.00				Average	
		10	81	6,257,091.5	1,897,798.1	401.00				Average	
		11	82	6,257,222.5	1,897,789.4	399.00				Average	
		12	83	6,257,338.5	1,897,803.5	394.00				Average	
		13	84	6,257,420.5	1,897,822.6	389.00				Average	
		14	85	6,257,458.0	1,897,839.8	386.00				Average	
		15	86	6,257,539.0	1,897,889.0	380.00				Average	
		16	87	6,257,652.5	1,897,973.5	370.00				Average	
		17	88	6,257,798.5	1,898,096.9	359.00				Average	
		18	89	6,257,962.0	1,898,238.8	351.00				Average	
		19	90	6,258,069.5	1,898,310.1	347.00				Average	
		20	91	6,258,184.5	1,898,364.2	344.00				Average	
		21	92	6,258,327.0	1,898,406.1	342.00					
WB La Jolla Village	48.0	1	93	6,258,328.0	1,898,430.5	342.00				Average	
		2	94	6,258,178.0	1,898,391.2	346.00				Average	
		3	95	6,258,057.5	1,898,338.5	350.00				Average	
		4	96	6,257,942.5	1,898,274.9	353.00				Average	
		5	97	6,257,770.5	1,898,143.6	359.00				Average	
		6	98	6,257,617.5	1,898,015.0	369.00				Average	
		7	99	6,257,512.0	1,897,937.9	377.00				Average	
		8	100	6,257,434.0	1,897,890.0	384.00				Average	
		9	101	6,257,395.5	1,897,873.4	386.00				Average	
		10	102	6,257,332.0	1,897,854.0	391.00				Average	

		11	103	6,257,225.0	1,897,843.1	396.00				Average	
		12	104	6,257,090.0	1,897,854.0	401.00				Average	
		13	105	6,257,019.0	1,897,872.8	402.00				Average	
		14	106	6,256,981.0	1,897,886.8	402.00				Average	
		15	107	6,256,897.5	1,897,939.2	402.00				Average	
		16	108	6,256,823.0	1,897,998.8	400.00				Average	
		17	109	6,256,743.5	1,898,089.4	399.00				Average	
		18	110	6,256,689.5	1,898,181.5	400.00				Average	
		19	111	6,256,631.0	1,898,337.1	400.00				Average	
		20	112	6,256,611.0	1,898,453.5	400.00				Average	
		21	113	6,256,606.5	1,898,542.8	401.00					

Recon Environmental
Jessica Fleming

18 February 2010
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 4609-1N
RUN: Hillel - Modeled Receivers

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
SB La Jolla Scenic	1	35	333	35	2	35	2	35	2	35	3	35
	2	36	333	35	2	35	2	35	2	35	3	35
	3	37	333	35	2	35	2	35	2	35	3	35
	4	38	333	35	2	35	2	35	2	35	3	35
	5	39	333	35	2	35	2	35	2	35	3	35
	6	40	333	35	2	35	2	35	2	35	3	35
	7	41	333	35	2	35	2	35	2	35	3	35
	8	42	333	35	2	35	2	35	2	35	3	35
	9	43	333	35	2	35	2	35	2	35	3	35
	10	44										
NB La Jolla Scenic	1	45	333	35	2	35	2	35	2	35	3	35
	2	46	333	35	2	35	2	35	2	35	3	35
	3	47	333	35	2	35	2	35	2	35	3	35
	4	48	333	35	2	35	2	35	2	35	3	35
	5	49	333	35	2	35	2	35	2	35	3	35
	6	50	333	35	2	35	2	35	2	35	3	35
	7	51	333	35	2	35	2	35	2	35	3	35
	8	52										
SB Torrey Pines	1	58	883	45	8	45	5	45	3	45	3	45
	2	59	883	45	8	45	5	45	3	45	3	45
	3	60	883	45	8	45	5	45	3	45	3	45
	4	61	883	45	8	45	5	45	3	45	3	45

	5	62	883	45	8	45	5	45	3	45	3	45
	6	63	883	45	8	45	5	45	3	45	3	45
	7	64										
NB Torry Pines	1	65	883	45	8	45	5	45	3	45	3	45
	2	66	883	45	8	45	5	45	3	45	3	45
	3	67	883	45	8	45	5	45	3	45	3	45
	4	68	883	45	8	45	5	45	3	45	3	45
	5	69	883	45	8	45	5	45	3	45	3	45
	6	70	883	45	8	45	5	45	3	45	3	45
	7	71										
EB La Jolla Village	1	72	1560	40	5	40	3	40	8	40	3	40
	2	73	1560	40	5	40	3	40	8	40	3	40
	3	74	1560	40	5	40	3	40	8	40	3	40
	4	75	1560	40	5	40	3	40	8	40	3	40
	5	76	1560	40	5	40	3	40	8	40	3	40
	6	77	1560	40	5	40	3	40	8	40	3	40
	7	78	1560	40	5	40	3	40	8	40	3	40
	8	79	1560	40	5	40	3	40	8	40	3	40
	9	80	1560	40	5	40	3	40	8	40	3	40
	10	81	1560	40	5	40	3	40	8	40	3	40
	11	82	1560	40	5	40	3	40	8	40	3	40
	12	83	1560	40	5	40	3	40	8	40	3	40
	13	84	1560	40	5	40	3	40	8	40	3	40
	14	85	1560	40	5	40	3	40	8	40	3	40
	15	86	1560	40	5	40	3	40	8	40	3	40
	16	87	1560	40	5	40	3	40	8	40	3	40
	17	88	1560	40	5	40	3	40	8	40	3	40
	18	89	1560	40	5	40	3	40	8	40	3	40
	19	90	1560	40	5	40	3	40	8	40	3	40
	20	91	1560	40	5	40	3	40	8	40	3	40
	21	92										
WB La Jolla Village	1	93	1560	40	5	40	3	40	8	40	3	40
	2	94	1560	40	5	40	3	40	8	40	3	40
	3	95	1560	40	5	40	3	40	8	40	3	40

	4	96	1560	40	5	40	3	40	8	40	3	40
	5	97	1560	40	5	40	3	40	8	40	3	40
	6	98	1560	40	5	40	3	40	8	40	3	40
	7	99	1560	40	5	40	3	40	8	40	3	40
	8	100	1560	40	5	40	3	40	8	40	3	40
	9	101	1560	40	5	40	3	40	8	40	3	40
	10	102	1560	40	5	40	3	40	8	40	3	40
	11	103	1560	40	5	40	3	40	8	40	3	40
	12	104	1560	40	5	40	3	40	8	40	3	40
	13	105	1560	40	5	40	3	40	8	40	3	40
	14	106	1560	40	5	40	3	40	8	40	3	40
	15	107	1560	40	5	40	3	40	8	40	3	40
	16	108	1560	40	5	40	3	40	8	40	3	40
	17	109	1560	40	5	40	3	40	8	40	3	40
	18	110	1560	40	5	40	3	40	8	40	3	40
	19	111	1560	40	5	40	3	40	8	40	3	40
	20	112	1560	40	5	40	3	40	8	40	3	40
	21	113										

Recon Environmental
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18 February 2010
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 4609-1N
RUN: Hillel - Modeled Receivers

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1	61	1	6,257,339.0	1,897,689.8	404.00	5.00	0.00	66	10.0	8.0	Y
2	62	1	6,257,321.0	1,897,679.0	404.00	5.00	0.00	66	10.0	8.0	Y
3	63	1	6,257,319.0	1,897,693.4	404.00	5.00	0.00	66	10.0	8.0	Y
4	64	1	6,257,306.0	1,897,702.9	404.00	5.00	0.00	66	10.0	8.0	Y
5	65	1	6,257,305.0	1,897,719.5	404.00	5.00	0.00	66	10.0	8.0	Y

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18 February 2010
TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 4609-1N
RUN: Hillel - Modeled Receivers

Barrier Name	Type	Height Min	Height Max	If Wall $ per Unit Area	If Berm $ per Unit Vol.	If Berm Top Width	If Berm Run:Rise	Add'tnl $ per Unit Length	Points Name	No.	Coordinates (bottom) X	Y	Z	Height at Point	Segment Seg Ht Increment	Perturbs #Up	Perturbs #Dn	On Struct?	Important Reflections?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Building 1	W	0.00	99.99	0.00				0.00	1	42	6,257,344.5	1,897,733.9	404.00	20.00	0.00	0	0		
									2	43	6,257,320.0	1,897,729.2	404.00	20.00	0.00	0	0		
									3	44	6,257,312.0	1,897,709.5	404.00	20.00	0.00	0	0		
									4	45	6,257,352.0	1,897,693.4	404.00	20.00	0.00	0	0		
									5	46	6,257,344.5	1,897,733.9	404.00	20.00					
Building 2	W	0.00	99.99	0.00				0.00	1	47	6,257,359.5	1,897,681.6	404.00	20.00	0.00	0	0		
									2	48	6,257,386.0	1,897,621.0	404.00	20.00	0.00	0	0		
									3	49	6,257,315.0	1,897,657.8	404.00	20.00	0.00	0	0		
									4	50	6,257,318.0	1,897,673.8	404.00	20.00	0.00	0	0		
									5	51	6,257,346.5	1,897,673.8	404.00	20.00	0.00	0	0		
									6	52	6,257,346.0	1,897,675.5	404.00	20.00	0.00	0	0		
									1	53	6,257,359.5	1,897,681.6	404.00	20.00					
Building 3	W	0.00	99.99	0.00				0.00	1	54	6,257,295.5	1,897,669.1	404.00	20.00	0.00	0	0		
									2	55	6,257,302.5	1,897,681.2	404.00	20.00	0.00	0	0		
									3	56	6,257,301.0	1,897,682.6	404.00	20.00	0.00	0	0		
									4	57	6,257,297.5	1,897,726.5	404.00	20.00	0.00	0	0		
									5	58	6,257,290.5	1,897,725.8	404.00	20.00	0.00	0	0		
									6	59	6,257,290.0	1,897,731.2	404.00	20.00	0.00	0	0		
									7	60	6,257,240.5	1,897,726.6	404.00	20.00	0.00	0	0		
									8	61	6,257,241.5	1,897,715.2	404.00	20.00	0.00	0	0		
									9	62	6,257,259.5	1,897,691.2	404.00	20.00	0.00	0	0		
									10	63	6,257,259.0	1,897,690.0	404.00	20.00	0.00	0	0		
									1	64	6,257,295.5	1,897,669.1	404.00	20.00					

Recon Environmental
Jessica Fleming

18 February 2010
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 4609-1N
RUN: Hillel - Modeled Receivers
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 64 deg F, 69% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1	61	1	0.0	54.4	66	54.4	10	----	54.4	0.0	8	-8.0
2	62	1	0.0	58.2	66	58.2	10	----	58.2	0.0	8	-8.0
3	63	1	0.0	56.6	66	56.6	10	----	56.6	0.0	8	-8.0
4	64	1	0.0	61.5	66	61.5	10	----	61.5	0.0	8	-8.0
5	65	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	5	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

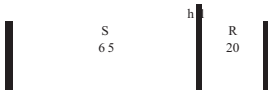
ATTACHMENT 5

fresnel = 2*delta/wave length
wave length = speed of sound/frequency

freq	wave l- m	wave l - ft	check
500	0.6 6	2.17	3.280797
1000	0.33	1.09	3.280797
2000	0.17	0.54	3.280797
250	1.32	4.35	3.280797

Receptor — at 500 Hz / at 1000 Hz

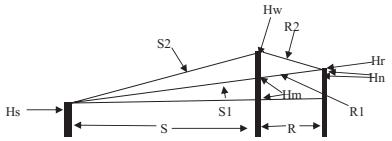
Location	S	R	Hs	Hw	Hr	Hm	Hn	delta	**fresnel**	fresnel	Approximate IL	Unabated Noise Level	Resultant Noise Level
R1-S1	10	171	430.5	432.5	407	-1.30	-22.20	0.570	**0.52**	1.05	12	37.3	25.3
R1-S2	10	212	418.5	420.5	407	-0.52	-10.98	0.330	**0.30**	0.6 1	11	35.6	24.6
R1-S3	10	256	418.5	420.5	407	-0.43	-11.07	0.305	**0.28**	0.56	11	34.0	23.0
R2-S1	10	89	430.5	432.5	407	-2.37	-21.13	1.028	**0.95**	1.89	14	42.4	28.4
R2-S2	10	113	418.5	420.5	407	-0.93	-10.57	0.46 5	**0.43**	0.86	12	40.7	28.7
R2-S3	10	126	418.5	420.5	407	-0.85	-10.6 5	0.434	**0.40**	0.80	12	39.8	27.8
R3-S1	10	125	430.5	432.5	407	-1.74	-21.76	0.742	**0.68**	1.37	13	39.8	26 .8
R3-S2	10	115	418.5	420.5	407	-0.92	-10.58	0.46 0	**0.42**	0.85	12	40.5	28.5
R3-S3	10	6 3	418.5	420.5	407	-1.58	-9.92	0.728	**0.67**	1.34	13	45.2	32.2
R4-S1	10	188	430.5	432.5	407	-1.19	-22.31	0.530	**0.49**	0.98	12	36 .6	24.6
R4-S2	10	16 5	418.5	420.5	407	-0.6 6	-10.84	0.372	**0.34**	0.6 8	11	37.6	26 .6
R4-S3	10	88	418.5	420.5	407	-1.17	-10.33	0.555	**0.51**	1.02	12	42.7	30.7
R5-S1	10	26 6	430.5	432.5	407	-0.85	-22.6 5	0.419	**0.39**	0.77	12	33.7	21.7
R5-S2	10	239	418.5	420.5	407	-0.46	-11.04	0.314	**0.29**	0.58	11	34.6	23.6
R5-S3	10	159	418.5	420.5	407	-0.6 8	-10.82	0.379	**0.35**	0.70	11	37.9	26 .9
R6 -S1	10	332	430.5	432.5	407	-0.6 9	-22.81	0.36 9	**0.34**	0.6 8	11	31.8	20.8
R6 -S2	10	303	418.5	420.5	407	-0.37	-11.13	0.287	**0.26**	0.53	10	32.6	22.6
R6 -S3	10	224	418.5	420.5	407	-0.49	-11.01	0.322	**0.30**	0.59	11	35.1	24.1
R7-S1	10	300	430.5	432.5	403	-0.89	-26 .6 1	0.428	**0.39**	0.79	12	32.7	20.7
R7-S2	10	26 0	418.5	420.5	403	-0.57	-14.93	0.342	**0.31**	0.6 3	11	33.9	22.9
R7-S3	10	203	418.5	420.5	403	-0.73	-14.77	0.388	**0.36**	0.71	11	35.9	24.9
R8-S1	10	254	430.5	432.5	401	-1.12	-28.38	0.501	**0.46**	0.92	12	34.0	22.0
R8-S2	10	213	418.5	420.5	401	-0.78	-16 .72	0.403	**0.37**	0.74	11	35.6	24.6
R8-S3	10	174	418.5	420.5	401	-0.95	-16 .55	0.457	**0.42**	0.84	12	37.2	25.2
R9-S1	10	220	430.5	432.5	395	-1.54	-33.96	0.6 48	**0.60**	1.19	13	35.2	22.2
R9-S2	10	181	418.5	420.5	395	-1.23	-22.27	0.545	**0.50**	1.00	12	36 .8	24.8
R9-S3	10	180	418.5	420.5	395	-1.24	-22.26	0.548	**0.50**	1.01	12	36 .9	24.9



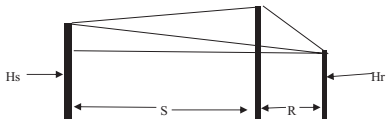
Source & receiver both at same height

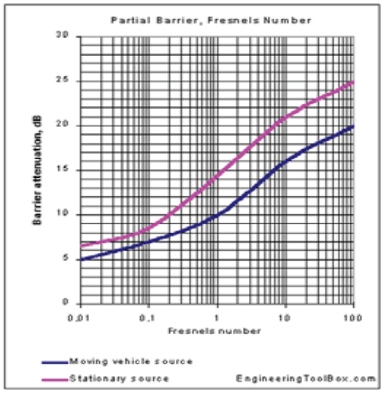
Hn=R/(S+R)*(Hr-Hs)
delta = (sqrt(S^2+(Hw-Hs)^2)+(sqrt(R^2+(Hw-Hr)^2))-(sqrt(S^2+Hm^2)+(sqrt(R^2+Hn^2))

delta = (S2+R2)-(S1+R1)
delta = (sqrt(S^2+(Hw-Hs)^2)+(sqrt(R^2+(Hw-Hr)^2))-(sqrt(S^2+Hm^2)+(sqrt(R^2+(Hr-Hs-Hm)^2))
Hm/(Hr-Hs)=S/(S+R) Hn/(Hr-Hs)=R/(S+R)
Hm=S/(S+R)*(Hr-Hs) Hn=R/(S+R)*(Hr-Hs)



Source & receiver both at different heights





Sound Power = 82

73	3 feet
48.6	50 feet

HVAC Requirement

1 ton per 500 square feet

6500 square feet

13 tons

*Assume 15 tons total, 5 tons per buidling

Receiver	X	Y	Z (Zo+5)
1	6257103.04881000000	1897701.85025000000	407
2	6257226.65992000000	1897639.35025000000	407
3	6257316.24325000000	1897589.35025000000	407
4	6257383.60436000000	1897549.76691000000	407
5	6257450.27103000000	1897500.46136000000	407
6	6257502.35436000000	1897457.40580000000	407
7	6257572.49325000000	1897608.10025000000	403
8	6257544.02103000000	1897678.93358000000	401
9	6257507.90992000000	1897768.51691000000	395

HVAC	X	Y	Z (Zroof+1.5)
1	6257283.04013000000	1897720.25303000000	430.5
2	6257324.18596000000	1897714.78428000000	418.5
3	6257362.72763000000	1897645.51344000000	418.5

	DISTANCE			NOISE WITHOUT PARAPET WALL				NOISE WITHPARAPET WALL			
Receiver	HVAC 1 Distance	HVAC 2 Distance	HVAC 3 Distance	HVAC 1 Noise	HVAC 2 Noise	HVAC 3 Noise	Total Noise	HVAC 1 Noise	HVAC 2 Noise	HVAC 3 Noise	Total Noise
1	182	222	266	37.3	35.6	34.0	40.6	25.3	24.6	23.0	29.2
2	101	124	137	42.4	40.7	39.8	45.9	28.4	28.7	27.8	33.1
3	137	126	74	39.8	40.5	45.2	47.3	26.8	28.5	32.2	34.5
4	199	176	99	36.6	37.6	42.7	44.6	24.6	26.6	30.7	32.8
5	277	249	170	33.7	34.6	37.9	40.6	21.7	23.6	26.9	29.4
6	343	313	235	31.8	32.6	35.1	38.2	20.8	22.6	24.1	27.5
7	312	271	214	32.7	33.9	35.9	39.2	20.7	22.9	24.9	28.0
8	266	223	185	34.0	35.6	37.2	40.6	22.0	24.6	25.2	28.9
9	233	193	192	35.2	36.8	36.9	41.1	22.2	24.8	24.9	28.9

	FLAT DISTANCE			FRESNEL (500 Hz)			INSERTION LOSS (500 Hz)		
Receiver	HVAC 1 Distance	HVAC 2 Distance	HVAC 3 Distance	HVAC 1 Fresnel	HVAC 2 Fresnel	HVAC 3 Fresnel	HVAC 1 IL	HVAC 2 IL	HVAC 3 IL
1	181	222	266	0.52	0.30	0.28	12	11	11
2	99	123	136	0.95	0.43	0.40	14	12	12
3	135	126	73	0.68	0.42	0.67	13	12	13
4	198	175	98	0.49	0.34	0.51	12	11	12
5	276	249	169	0.39	0.29	0.35	12	11	11
6	342	313	234	0.34	0.26	0.30	11	10	11
7	310	270	213	0.39	0.31	0.36	12	11	11
8	264	223	184	0.46	0.37	0.42	12	11	12
9	230	191	190	0.60	0.50	0.50	13	12	12